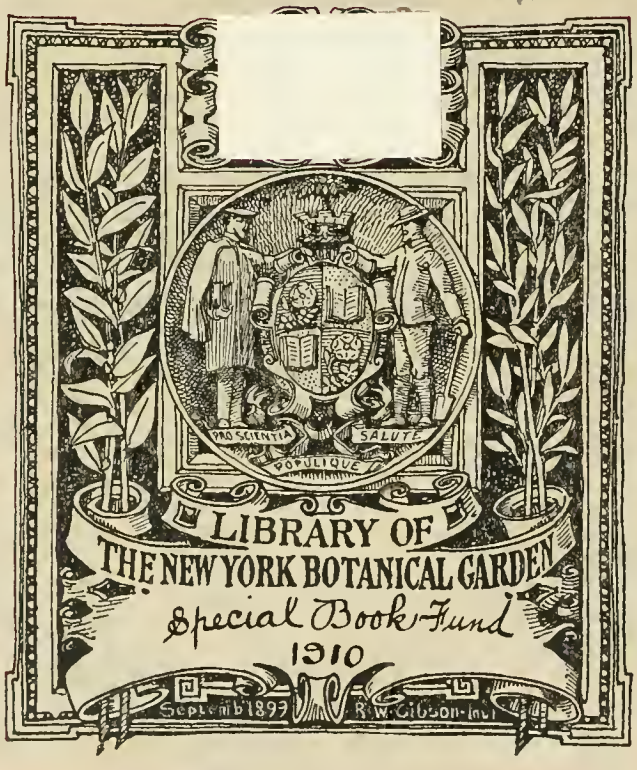
XJ .0912


PRO SCIENTIA
SALUTE
POPULIQUE
LIBRARY OF
THE NEW YORK BOTANICAL GARDEN
Special Book Fund
1910
Septemb 1897
R. W. Gibson Inv.

THE

JOURNAL OF HORTICULTURE,

COTTAGE GARDENER,

AND

COUNTRY GENTLEMAN.

A CHRONICLE OF THE HOMESTEAD, POULTRY-YARD, APIARY, & DOVECOTE.

CONDUCTED BY

GEORGE W. JOHNSON, F.R.H.S., AND ROBERT HOGG, LL.D.

THE FRUIT AND KITCHEN GARDENS, by Mr. J. Robson, Gardener to Viscount Holmesdale, M.P., Linton Park; and Mr. J. Taylor, The Gardens, Longleat.

THE FLOWER GARDEN, by Mr. T. Record, Vinters Park, Maidstone; and Mr. E. Luckhurst, Old Lands, Buxted.

STOVE, GREENHOUSE, and WINDOW GARDEN, by Mr. G. Abbey, Grinkle Park.

VILLA AND SUBURBAN GARDENING, by Mr. Thomas Record.

GARDENING CALENDAR, by Mr. J. Douglas, Loxford Hall.

FLORISTS' FLOWERS AND FLORICULTURE, by the Rev. H. H. Domerain.

POULTRY-KEEPING, by Mr. J. Baily; and E. Hewitt, Esq.

PIGEONS, AVIARY BIRDS, &c., by "Wiltshire Rector;" Mr. Barnesby, and others.

BEE-KEEPING, by "B. & W.;" and Mr. A. Pettigrew.

HOUSEHOLD ARTS, by the Authoress of "My Flowers," and others.

LIBRARY
NEW YORK
BOTANICAL
GARDEN.

VOLUME XXVIII., NEW SERIES.
VOL. LIII., OLD SERIES.

LONDON:
PUBLISHED FOR THE PROPRIETORS, 171, FLEET STREET.

1875.

N
.C912
Jan June
1875

LONDON:
PRINTED AT THE JOURNAL OF HORTICULTURE OFFICE,
171, FLEET STREET.

TO OUR READERS.

When Charles Knight was told of an intended journal, he advised that it should contain "things new and old;" and one of his concluding observations was, "If you find it is useful, that will be almost as pleasing as its being profitable." Experience has confirmed to us the truth of that veteran publisher's utterances. We have sought successfully for the best of things new and old, and no pleasanter narrative has reached us than that which told of a farm labourer, whose library, besides his bible, prayer and hymn books, comprised no more than two of our old volumes. His garden was always mentioned by the village parson as a model, and that parson glowed with pleasure as he told how the labourer acknowledged that his flower beds were from Donald Beaton's teachings, his roof Vine was prolific from Robert Fish's, and his kitchen garden productive from James Barnes's. Those teachings were in the two old volumes of our Journal; but in that cottage our newer name was not admitted, for, as its tenant said, "I calls it 'The Cottage Gardener'—the name comes more home." Gladdened are we by such testimony to our usefulness, but further gladdened are we by the knowledge that we are useful to the amateur and the gardener; for them, for all who delight in home surroundings, we obtain the best of "things new and old"—we say emphatically "the best," because they are rendered to us by those known to be well skilled.

We have no new thing to say in conclusion, for it is an old thing for us to have to thank our helpmates and our readers for enabling us still to say that we rejoice in being

THE EDITORS.

INDEX.

Aberdeen Poultry Show, 44
Acacia affinis hardy, 53
Acacias in conservatory, 216
Acanthus culture, 3
Acarus gallinæ, 504
Accrington Poultry Show, 338
Achimenes, select, 128
Aconite, culture of Winter, 93
Acres of orchards, &c., 153
Adelaide Botanic Garden, 147
Adenandra uniflora and culture, 387
Adiantums, Farleyense not thriving, 243; potting, 81
Adonis-flowers, our border, 52
Æthionema coridifolium, 491
Ageratums, sowing, 111
Ajugas, reptans, 148; hardy, and culture, 121
Albert, Prince Consort, a gardener, 241
Alexandra Park Horticultural Show, 393
Alisma plantago and culture, 452
Alloa Poultry Show, 88
Aloe perfoliata, 2 7
Alsophila Leichardtiana, 495
Alternanthera culture, 81
American, blight, 170, dressing, 170; Aloe, flowering, 478, rapid growth, 390
Amsterdam International Show, 221
Anderson testimonial, 198
Androsace imbricata, 368
Andryala lanata culture, 354
Anemones and culture, 291
Annuals, culture of half-hardy, 349; for smoky gardens, 127; hardy for any garden, 211
Anthurium Scherzerianum culture, 415
Antwerp Great Horticultural Show, 23, 271, 293
Ants, in hotbeds, 357; and green flies, 393
Apiary, shelterin, 59
Apples—cankered, 80; late cooking, 81; from cuttings, 127; diseases, 127; keeping late, 148; late, 461; sweating, 81; trees, culture of old, 175, heading maiden, 13, for light soil, 69, pruning old, 60; American, 73; Ashmead's Kernel, 181; Bleoheim Pippin, 348; Lady Henniker, 236; Golden Knob, 121; French Paradise, 391; Quarrenden, 103; Reinette du Canada and Northern Spy, 499
Apricot, pruning, 60; sucker, grafting, 186
Aquarium and flower-stand, 278
Aquilegia glandulosa, 328
Arbor day in Nebraska, 220
Arbor-Vitæ, from cuttings, 127; dying, 170
Archerfield, 8, 29
Areca Palm, 84
Artichokes, 95
Ash, a celebrated, 153; tree, weeping, 476
Asparagus, 95; forcing, 58; liquid manure for, 357; culture, 418; transplanting old, 170
Aspatria Poultry Show, 87
Aspen, 351
Asphalt, drive, 396; walk, tar needed, 128
Asplenium fronds injured, 318
Asters, for July, 148; sowing, 334
Astrantias, 215
Aswarby Park flower garden, 310
Aucuba, berries, 283; monœcious, 368; sowing, 318
Auriculas — abnormal, 201; the late Mr. Downing's, 168; long-stemmed, 240; with north aspect, 243; and culture, 291; growing tall, 257; Alpine, 345; at Manchester, 346; at Royal Botanic, 347; at Turner's Nursery, 349; showing, 384, 375, 487, and growing, 493; seedlings, 395; sticks for, 418
Austin, W., 279
Aviary, the, 10
Ayres, W. P., 76
Azaleas, culture, 196, 478; linearifolia, 431; management, 353; repotting, 357

Baildon Pigeon and Bird Show, 66
Balbisia verticillata, 496
Bananas, 256
Bantams, Silver-laced, feathers, 302; size and management, 320; what to keep, 46; for Scotland, 68
Bark of trees rabbit-eaten, 127
Barrenworts, 254
Bath and West of England Society's meeting, 263, 350, 393; Show, 423, 437
Bay, cuttings, 319; propagation, 87
Beak diseased, 192
Beans, Broad and Kidney, 95; Mount d'Or Runner, 3
Bedding, arrangements in small gardens, 417; plants, propagating, 221, from seed, 103, 111, for spring, 378, white, 170
Bedlington Poultry Show, 421
Beech, 219; Burnham, 220
Bee-keeping in 1874, 45; in Russia, 46
Bees—do they sleep? 22; how to dispose of honey, 67; economical hiving, removing stocks, 68; in 1875, onwards, metheglin, 89; sale of honey, combs black, 90; depression of frames, the slinger, 109; drones, 132; swarms and bar-frame hives, depression of frames, 133; Pettigrew's hives, moving hives, 134; Ligurian, 153; dying after cold weather, 151; Ligurian, 210, 174; feeding stocks, 210; Ligurian *versus* common, at Hanwell, 227; driving, 238; honey caodying, 247; Billiog on, 248; Pettigrew's book, 248; swarm from two hives, 248; look out for, exhibitions; Ligurians *versus* Black, 267; candying of honey, honey cakes, 268; unfavourable weather, 286; our native, how to make a hive, 287; best hive, commencing keeping, 288; Ligurian *v.* common, 304; chilled brood, bar-framed hives, wax from old comb, 306; rules for Manchester Show, Ligurian *v.* common, 323; killed by cold, bar-framed hives, in common hives, 324; in Somerset, 338; cutting out, 341; Keepers' Association, 342; feeding trough, 361; Ligurians, 361; swarming and supering, 361; California honey, artificial swarming, 332; Keepers' Association, 383; winter experience among, English and Ligurian, feeding, artificial swarming, 384; early swarms, 397; saleable honey, removing eggs, 400; managing small apiaries, "Manual of Bee-keeping," 401; straw super, 402; swarm in May, their profit, cement for guide combs, driving from supers, 423; Carr-Stewarton hive, postponing hiving, feeble hive, 424; weak stocks, 443; stock of driven, 442; clustered, 442; cheap hive, 442; feeding, 483; transferring eggs, 463; "Book for Keepers," 464; driving, 464; swarm, 464, first or second, 464, in a chimney, 483; intrusive letters, 483; swarming, 493; driven, 484; hives, 484; preventing swarming, 484; feeding, 503; taking honey, 504; not swarming, 504; clustering, 504; claiming a swarm, 504; drone traps, 504
Beet, 96; Chilian, for winter decoration, 338; woody, 183
Bell, Mr. J , 124
Berberidopsis corallina for wall, 69
Birds, and fruit buds, 47; exported to New Zealand, 54; protecting buds from, 102, 189
Birmingham, Horticultural Exhibitions, 4; Columbarian Show, 20; forthcoming Show, 469
Blackberries, cultivated, 123
Blackthorn spring, 379
Blumenbachia cbnquitensia, 52
Boiler, 219; heating houses from one, 36
Bone dust for chickens, 208, meal, 484
Borage decorative, 293
Border flowers, 3, 6, 98, 160, 189, 215, 233, 254, 274, 333, 354, 369, 410, 452, 471; our, 72
Border plants, 487
Borecole, 96
Boston Poultry Show, 503
Botanic (Royal) Society's Show, 253, 323, 407, 469
Bouquet, how made, 275; making, 294
Bouvardia culture, 186
Boxwood, 123
Bragg, Mr. T., 118
Brahmas—characteristics, 22; for egg-producing, 62; as egg-producers, 129; pullet, crippled, 306, moping, 154; feet swollen, 464
Bravoa geminiflora and culture, 369
Briar, shoots, heading-down, 81; stocks, seedling, 244
Brick-kilns *versus* plants, 163
Bristol Poultry Show, 39
Broccoli, 95; Cooling's 420; the Leamington, 310; insects on root, 337; varieties and sowing, 243; select, 262; Snow's Winter White, 120, 142; sorts and succession, 189
Brownea grandiceps, 369
Brussels Centenary Show, 277
Brussels Sprouts, 95; sowing, 156
Budding, 55, 73; treatment of shield, 144
Buds, destroyed by birds, 338; maggot-eaten, 420
Bulb-forcing, 58; in greenhouse, 60
Bulbocodium vernum culture, 188
Bullfinches, managing piping, 210; rearing nestling, 442; seed for, 424
Button-hole flowers, 283

Cabbages, 96; clubbing, 396; Kergueelen, 276
Cages, Crystal Palace prize, 247, 305; and red mite, 191
Caladiums, culture, 81, 251; select, 128
Calanthes at Drumlanrig, 213
Calceolarias, for bedding, 293; culture, 281; dying, 357; failures, 375; suddenly failing, 59; sowing, 458
Californian trees, 241
Calochortus albus and culture, 93
Camellias, 215; culture, 186; not flowering, 318; to obtain early, 89; leaves browned, 102, variegated, 186
Camphor, effects on plants and seeds, 277
Canaries, 359; breeding, 402; breeding cages, 268; breeding management, 288; selecting for breeding, 332; cage for moulting, 399; colour, 194; and cayenne, stimulating food for, 228; hardiness of, 45; over door, 63; management, 342; quarrelling, 342; seed for, 110, 492; seed, substitute for, 324; wheezing, 288; Belgian, 481; Goldfinch Mules, 110; and Goldfinch, 192; London Fancy, 284, 323, 399; Crested Norwich, 350, 381, 434, 484; the Yorkshire, 441
Cankered fruit trees, 262
Canterbury Poultry Show, 82
Carnation, cuttings, 169; and Pink culture, 184
Carnoustie Poultry Show, 87
Carpet-bedding plants, 127
Carrot growing maggot-free, 150
Carrots, 96
Carter's prize cup, 472
Castor-oil Plant, 278
Catasetum maculatum and culture, 369
Cattleya citrina culture, 206 [372
Cauliflowers, planting out, 336; select, 283; sowing, 96, 101, early, 153; Veitch's Giant, 348
Celeriac culture, 223
Celery, 96; earthy-flavoured, 148; sowing, 156, early, 156; and earwigs, 497; 456
Celosia pyramidalis culture, 391
Cerambyx heros, 202
Cerastium propagation, 170
Ceylon, land demand in, 334; vegetable products, 5
Chelones, 233
Cherry trees unfruitful, pruning, 60
Chervil and Cress, 96
Chestnut, Sweet, 121; of a Hundred Horses, 132
Chicago, cold at, 221
Chickens, cramoed, 288; from 1200-year-old eggs, 347; dead in egg, 324, 402; from double-shelled egg, 421; management, 499; scarce, 285; weak, 238
Chicory, 96
Chimonanthus fragrans, culture, 216; 435
Chinese plants coloured artificially, 334
Christmas Rose, 138
Chrysanthemums, 37; cataonache, 431; culture, 81, 184
Churchyard grass, London, 128
Cinerarias, culture, 444; mildewed, 148; sowing, 458; suddenly failing, 59
Classes at poultry shows, 300
Clematises, propagation, 499; spring-flowering, 269; Jackman's, 345
Climbers, for greenhouse, 357; for wire arches, 396; under glass, 493; for a north wall, &c., 170
Cockatoo management, 110
Cockscombs and culture, 274
Coelogyne cristata, 199
Colchicum luteum, 236
Cold, plants' power to resist, 257
Coleworts, culture, 417
Colletia horrida, 4
Cologne International Show, 167, 853, 866, 451, 472
Colouring birds artificially, 322
Colours, arrangement of flower, 454, 488
Columbines and culture, 333
Conifers in exposed places, 363, 411, 413; planting, 37; seed sowing, 81
Conservatory construction, 13
Contractor's rights, 185
Convolvulus major and culture, 329
Coop, 103; exhibition, 106; for hen, 134, 154
Coprosma Baueriana variegata, propagating, 87, 386
Cordylines, hardy, 120; indivisa hardy, 72, 93
Cornflower, Blue, 123
Cottagers' Shows, 396
Couleur de rose, 358
Covent Garden Market, 22, 46, 68, 90, 110, 134, 154, 174, 194, 210, 228, 248, 268, 288, 306, 324, 342, 362, 384, 402, 424, 442, 464, 484, 504
Cowstips for meadow, 170
Crocuses, bulbs eaten, 206; byzantinus, 51; chrysanthus, 367; forced, 186; failing, 186; Crewe, 495
Crop, hard in fowls, 84, 103
Crops, sowing main, 168
Crowle Poultry Show, 468
Crown Imperials in greenhouse, 60
Cryptogamic Society, Scottish, 333
Crystal Palace, Bird Show, 152, 190, 226; Poultry Show, 66, 68; action against Secretaries, 83; Canary and Bird Show, 90; Horticultural Show, 428
Cuckoo, a caterpillar destroyer, 458; poultry feathers, 172
Cucumbers—ambury, &c., 63; living bed, 186; bitter, 88; Dickson's Favourite, 73; failures, 139; for frames, 128; in frames, 300; in greenhouse, 185; two good, 409; in house, 80, 283; in small house, 318; leaves in-

OCT 15 1910

Cucumbers—Continued.
sected, 337; liquid manure for, 262; and Melons, 262; Monro's Duke of Edinburgh, 419; in Peach house, 206; pit, constructing, 243; plants checked, 236; roots, diseased, 33, 52, knobbed, 6; for September, 478; sorts, 96; summer and winter, 180; sowing, 169; temperature in winter, 94; Tender and True, 472; not thriving, 396; in vinery, 102; in winter, 47
Cupar Poultry Show, 18
Cupressus Lawsoniana, 249
Culford Hall, 164, 216
Cullum, Lady, 167
Cup not silver, 128
Currants, Black, 60; for damp places, 60; trees, caterpillars on, 420
Cutler, testimonial to Mr., 51
Cuttings, decaying, 337; sent by post, 375
Cyclamens, culture, 73, 262, 283; seedling culture, 499; seedlings, 283; persicum, 262; out of doors, 262
Cyclobothra alba and culture, 98
Cydonia, Japonica fruit, 149; Maulei, 236
Cyrtoperis sanguinea, 277
Cytisus Adami, 493

Dahlias—planting, 316; select, 170; for showing, 357; staring, 184
Daisies, destroying, 223
Dalkeith, 181, 203, 240
Daphne cneorum culture, 437
Dari as poultry food, 463
Deciduous shrubs, pruning, 60
Dendrobiums, 270; in Burmah, 249; cariniferum, 413; nobile culture, 460
Deodorising sewage, 267
Deutzia gracilis, culture, 156; unhealthy, 223
Dichorisandra Saundersii, 890
Dieffenbachia brasiliensis and culture, 452
Dielytra spectabilis culture, 185
Digging, cost of, 206
Dinner-table decorations, 124
Diosma uniflora and culture, 387
Disbudding fruit trees, 394
Dondia epipactis culture, 215
Dorking, the exhibition, 58, 82, 103, 104, 149, 171, 187, 244, 284; age of, 128; toes swollen, 171; diseases, 171; with Brahmas, 174; dying suddenly, 154; White and Cuckoo, 284; hen, 224; characteristics, 187, voracious, 192; Silver-Grey, 245
Doronicums, 410
Dorset Poultry Show, 104, 129
Draceenas, 94, 475; hardiness of, 878; propagation, 81; Smithii, 496
Dragoons, 45
Drawing-room Ferns and plants, 205
Ducks, Aylesbury, 210; Call, 68, 288; supply of eggs, 283; fowls with, 46; for exhibiting, 68; in garden, 357; Mandarin and Carolina, 192

East and north-east winds, 325
Echeverias, bedding-out, 419, 420; metallica from seed, 186; pumila culture, 262
Edinburgh Fruit Show, 221
Egg buyers and sellers, 338
Egg-eating fowls, 248
Egg-layers, 90
Eggs, 283, 358; blood in, 154; boiling, 442; cooking soft, 402; detecting fertilised, 402; detecting sex, 402, 442; and east wind, 420; imported, 154; keeping, 362; number in a hen 302; preserving, 306, 601; shell less, 192; soft-shelled, 174; vendors of double, 303
Endive, 117
Epidendrum syringothyrsis, 161
Epimediums and their culture, 254
Epworth Poultry Show, 389
Eranthis hyemalis culture, 93, 159
Erysimum pumilum, 368
Erythrotis Beddomei, 161
Espalier wires for Pears, 243
Essex Poultry Show, 358, 379
Eucalyptus cornuta, 51
Eucharis, amazonica, 12; culture, 122, 163, 189; not flowering, 59
Eugeni Ugni, large, 476
Euphorbiaceæ, 295
Evergreens, planting, 147; pruning, 60
Everlasting Flowers, 13
Exeter Rose Show, 489
Exhibitions, crowding plants at, 388

Faenham Poultry Show, 63
Feather-eating fowls, 134, 862
Feru case draining, 243
Fernery, climbers for, 170; management of hardy, 98; plant for surface, 252
Ferns, how to grow, 95; not well grown, 25; potting, 149; re-arranging, 38; poisoned, 478; for stove, 186; not thriving, 498; tree, 495
Fertilisation, aids to, 314
Fertilising flowers, 337
Ficus elastica, 6
Figs, on greenhouse wall, 243; house for, 60; in pots, 148; last year, 187
Fine-foliaged plants for indoor decoration, 418
Flamingo Plant, 415
Floral Society, Metropolitan, 124
Flower garden, the, 3 8, 330, 450
Flower gardening, semi-natural, 435
Flower Missions, 180, 201, 256, 416
Flower perfumes, chemical effect of, 876
Flowers, changing their colours, 28, 94, 123; early, 94; packing, 137, 164; hardy early spring, 343; hardy plants for cut, 486; preservation of, 454; and fruit for sick poor, 449; choice spring, 465; preparation of forced, 219
Fine-heating greenhouse, 313
Forcing plants, 77
Forfar Poultry Show, 16
Forget-me-nots, 26; for spring gardening, 492
Fourcroya, undulata, 277; Selloa, 161
Frost, effects of, 96
Fowl-house, 288
Fowls, diarrhœaed, 192; out of condition, 192; not laying, 132; non-sitting, 504; legs scaly, 5 4; with Ducks, 46
Frame lights, economising, 221
Francoas and culture, 274
Fret, do not, 417
Fritillary and culture, 72
Frosterley Poultry Show, 265
"Fruit Manual," 348
Fruits—blossoms, 325; forcing, 12; growing for sale, 81; prospects, 331, in Scotland, 202; protecting, 477; selection of, 3, 50; thinning, 894; trees, cordon and pyramid, 477, summer pinching, 419, on walls, pruning, 205
Fuchsias for pillars, &c., 478
Fuel for stove, 499
Funkia albo-marginata and culture, 5
Furze, propagating double, 127

Galanthus Elwesii, 367
Galeandra Baueri and culture, 314
Galeo s and their culture, 411
Gamhoge, 5
Game and poultry foreign trade, 360
Gardenia, culture, 223; Stanleyana culture, 254
Garden, my, in 1874, 48; notes from my, 92, 137, 215, 290, 334; of Herbs, 32; prospects, northern, 374; men required for, 396
Gardeners' Benevolent Institution, 51
Gardener's dress of old, 79
Gardener's wages five centuries ago, 353
Garland flower, 487
Gas-heated boiler, 178, 262, 283
Geese this spring, 324
Geraniums—bedding, 231, 251, 289, 328; for bouquets, 38; easy growing for beds 313; fancy drawn, 81; leaves, browned, 208, curled, 262, dotted, spotted, 337; leggy, 82; overpotting, 120; potting, 81, and cuttings, 148; for exposed site, 436; sowing, 837; stopping seedling, 148; Lucius, 337; culture of Tricolor, 460; White-edged Little Trot, 92
Gerarde, Jobo, 145
Gibson, Mr. J., 28
Ginger, wild, 37, 81
Gladiolus planting, 261
Gladioluses, culture, 290; select, 81
Glasgow Winter Gardens, 376
Glasnevin Gardens, flowers at, 215
Glass, drilling holes in, 287; frosted, 864
Gloxinias, from seed, 176; Van Houtte's, 232; select, 128
Gold fish in greenhouse, 478
Gooseberries, select, 262
Gooseberry, borer, 471; caterpillar, 436, 472; sawfly, 435
Gorse, double, propagating, 436
Grafting, 317; heading trees for, 17; wax, 60
Grapes—for south wall, 12; Golden Champion, 52, 78; packing, 77; of the past, 128; Muscat Hamburgh, 136; three approved, 158; Mrs. Pince and Lady Downe's, 198; Mrs. Pince, 216; thinning, 262, 269; shanking, 292; forcing, 308; large bunches, 308; rusted, 337; spotted, 357, 395; exhibiting and packing, 393; packing, 410; for market, 436; Gros Guillaume, 456; late-keeping, 365, 415, 492; diseased Muscat 499
"Grape Vine, Treatise on," 429
Grasses, ornamental, 18
Gravel sweep, draining, 170
Grave, plants for, 396, 455, 476
Green fly, preventing, 888; and ants, 896
Greenhouse—constructing, 206, 498; fumigating, 186; heating, 102, 103, 1:7; heating with Cucumber house, 206; management, 355; plants unhealthy, 81; removable, 186
Greya Sutherlandi, 413
Grievances and correspondence, 479, 500
Grouse, ruffed, 191, 285; pinnated, 191, 305
Guareas, 262
Guinea fowls, rearing young, 424
Guinea pigs' food, 268
Gumming, its cause and prevention, 193
Gustavia gracillima, 236

Halls and corridors, plants for 385
Hamburghs, feathers of Pencilled, 130; Silver-spangled, 1
Hants and Berks Poultry Show, 500
Hardwicke House, 54, 74
Harlaxton, 258
Haricots, White, 76
Harwood Poultry Show, 320
Haslingden Poultry Show, 481
Hatching, protracted, 402; season, the present, 421, 480
Heating, 243; a range of houses, 300; houses, 149, several, 102
Hedges, 37; for hollow, 243; Thorn and Privet, 223
Helleborus fœtidus, 410
Henderson's, E. G., nurseries, 367
Hen-house mites, 504
Hens, broody, 244, 379
Herbaceous plants for forcing, 420
Hexham Poultry Show, 15
Hieracium verbascifolium culture, 854
Hitchin Poultry Show, 18
Hoeing, 376
Hollies, unfruitful, 436
Holly, berries for Christmas, 886; hedge, cutting, 127; leaves falling, 81
Hollyhocks, 184; diseased, 228
Home Plot, My, 273
Horseradish culture, 431
Horticultural Club, 256, 449
Horticultural International Shows, 181
Horticultural shows, influence of, 97
Horticultural (Royal) Society, 235, 251, 294, 297, 388, 390, 429, 491, 492; Meeting, 444; Annual Meeting, 112; Adjourned Meeting, 191; Special Meeting, 4 4, 409; Carter's Cup, 54; Committees, 51, 158 177, 272, 403, 426; Council, 451; crisis, 177; Fellows elected, 277; notes on, 218; restoration of Shows, 198; resignations, 184; Great Show, 426; Shows, 160, 214, 309, 327, 366; of Ireland, 189
Houdans, 104, 235; characteristics, 22; as layers, 244; laying, 264, 301; Mr. Quibell's 451; suddenly white, 128; weight, 248
House decoration, miniature standards for, 49
Huddersfield Poultry Show, 14
Hull Pigeon Show, 245
Humea elegans culture, 223
Hyacinths, 282; in glasses, 179; growing in moss, 158; in warm house, 205; Cutbush's and Veitch's, 236; planting, 81; removing leaves, 435; select, 12
Hyde Park, spring bulbs in, 361

Indiarubber tree, 5
Insect-eaters, vegetable, 143
Insects, beautiful and useful, 99, 201; chapters on for gardeners, 407; in greenhouse, 357; in stoves, &c., 418
Iris germanica varieties, 496
Irises, and their culture, 237; germanica, 278; for wet soil, 478
Ivies, 186
Ixia culture, 283
Ixoras and ants, 5

Jack-boots, 430
Jamesia americana, 51
Java Sparrows, 534
Jersey Poultry Show, 100
Jerusalem Artichokes hard, 288
Joints of hot-water pipes, 202
Jonesia asoca culture, 94
Judges of poultry, 207

Kale, variegated, for bedding, 467
Kales, variegated, for decoration, 121
Keighley, consequence of small pox at, 393
Kendal Poultry Show, 150
Kew Gardens, novelties in, 62, 94, 141, 216, 254, 274, 347, 368, 431; new Assistant Director, 430
Kidney Beans, forcing, 37, 222
Kilmarnock Poultry Show, 21
Kitchen-garden cropping, 241
Kniphofia Macowani, 496
Kohl Rabi, 117

Larks maraudino, 6
Laurel hedge, cutting, 127
Laurels, pruning, 435
Lavender culture, 436
Lawn, patchy, 170; plants in tubs for, 17; trees for, 13
Laying, intermittent, 110
Leaves, devices in, 16; healing wounded, 217
Leeds Gardeners' Benefit Society, 94
Leeks, 117
Lee's testimonial, 358
Lettuces, 117; our, 138; sowing early, 156; Stanstead Park Cabbage, 311
Lewisia brachycalyx, 368
Lobnia floribunda, 149
Lilium, Brownii, 357; canadense var. parvum, 161; for wet soil, 478
Lily of the Valley, culture, 180, 214, 223; not flowering, 420
Lilies, 4
Lime, for clayey soil, 170; or Linden Tree, 143; water for worms, 59
Lindley's, Dr., son a Judge, 378
Linnean Society, 257
Linnets plucking Canaries, 5 4
Linum trigynum for winter, 213
Lithospermum fruticosum, 368
Liquid manure, of fowls' dung, 460; for greenhouse plants, 337
Lithoapermum prostratum culture, 331
Lobelias, sowing, 111
London parks and gardens flower beds, 454, 488
Lonicera, aureo-reticulata, 186; tatarica, 379
Loxford Hall, 472
Lowestoft Poultry Show, 85
Lunaria biennis, its use and culture 119

Magnolia grafting, 262
Maidstone Poultry Show, 64, 83
Mallow, Curled, 118
Manchester, Bird Show, 20; Horticultural Show, 389; market-gardening, 431
Man, early season in Isle of, 470
Manure, artificial, 60
Manuring, mode of, 184
Maranta, Baraquini culture, 357; roots, insects on, 207
Market garden and nurseries, old London, 412
Markham, Gervase, 370
Mascall, Leonard, 78
Masdevallia, chimæra, 236; Estradæ, 496; peristeria, 277
Masterworts, 215
Meadow, manuring, 170; Saffron in pasture, 318
Mealy bug, 179; remedies, 217
Melocactus communis and culture, 62
Melon, house, fruit trees for, 127; seeds, old fertile, 223
Melons, for frame, 128; in frames, 170, 800; prolonging cutting, 451; in small house, 318; in greenhouse, 185, 337; not setting, 426; sowing, 169; swelling irregularly, 396, 465; stems cankering, 478; Little Heath, 160, 183; Read's, 498
Meninia turgida, 368
Meredith's Vineyard, 257
Mesembryanthemum cordifolium variegatum culture, 6
Meteorology of 1874, 63, Ticehurst, 76
Middleborough Pigeon Show, 19
Midsummer-day, 499
Mignonette, Tree, culture, 261; Parsons' White, 314
Mildew on plants, 223
Millom Poultry Show, 19
Mistletoe culture, 59
Morina culture, 452
Morpeth Poultry Show, 321
Mulching fruit trees, 254
Mulberry, polygamous, 476
Mushroom, 118; bed making, 283; forcing, 222; growing, 82; spawn making, 102
Musk tree, 262

"Narcissus, The," 358
Narcissus poeticus and other species, 141
Nectarines, forcing, 59; on Peach trees, 93; not thriving, 13; Welbeck Seedling, 74
Nenthead Poultry Show, 87
Nerium acapomoides, 102
Nests for sitting, 324
Nets, preserving, 206
Nice, notes from, 235; weather at, 160
Nolanas and culture, 297
Northampton Poultry Show, 207
North British and Scottish Ornithological Societies, 247

Oak, the evergreen, 431; galls, 435
Odontoglossum, maxillare, 52; Warscewiczii, 367
Onions, 118; autumn-sown, 467; all the year, 160; the Queen, 404
Orange culture, 143; seedling fruiting, 149
Oranges, home-grown dessert, 68; trees, in pots, 282, pruning, 206
Orchard, fruit trees for, 38; house merits, 864, routine, 80, 251, 336; trees, pruning neglected, 186; house and greenhouse arrangements, 243
Orcharding, 81
Orchid, culture, 222; house routine, 395; hunter in Burmah, 249, 270, 291, 327
Orchids—in baskets, 459; for cool house, 318; easily grown, 101; for Fern house, 149; for stove, 357; at Messrs. Veitch's, 312; for winter, 12
Orchis, The Fly, 215

Ornithological (National) Association, 265
Osmunda regalis, 498
Oxford Poultry Show, cups, 172, 210

Pæonia Moutan failing, 13
Paisley Poultry Show, 65
Palma-Christi, 5
Palms flowering out of doors, 420
Panicum capillare, 244
Parkinson, John, 493
Parrot self-plucking, 268, 342, 384
Parsley, 118; superstition, 430; White, 419
Parsnip, 118; wine, 306
Passifloras, edulis, and culture, 258; in greenhouse, 244; pruning, 127; in vinery, 283
Past and future, 1
Paul's, W., Roses in pots, &c., 3; Spring Exhibition, 253
Pea trellises, 420
Peach orchard, the largest, 472
Peaches—aphis on, 395; the Condor, 470; Exquisite, 499; Flat of China, 395; forcing, 37, 69, 280, 382, 350; not fruiting, 478; house, management, 101, routine, 185; leaves, decayed and blistered, 419, diseased, 478; trees, gumming, 170, injured, 318, not thriving, 13, training, 80
Peachery, management, 418; moisture in, 317
Peacock, white, 110
Pears—blossom buds, 283; diseased, 127; estimates of, 338; gathering, 170; leaves blotched, 486; insects on, 436; price, 81; good sorts, 290; list of in Rutland, 183; varieties, 140; last year, 187; Easter Beurré, 294; Knight's Monarch, 121, 206; Ne Plus Meuris and Bergamotte d'Esperen, 193; Lucy Grieve, 277; Souvenir du Congress, 161; Winter Nelis, 259
Peas, 118; Laxton's Connoisseur, 50, 94; late crops, 486; Culverwell's Prolific, 72; early, 37; obtaining early, 153; sowing early, 58; preserving green, 402; protecting from sparrows, 146; for September, 478; sowing, 260; trench sowing, 128; succession of, 497; watering, 458
Peaty soil, fruit trees for, 38
Pelargoninms, new type, 2; oblongatum, yellow, 814; potting, 126; show, 215; Zonal, dying, 283
Penrith Poultry Show, 88
Pentstemons, 283; antirrhinoides, 276; culture, 160
Perches, 324
Peristeronic Society's Show, 67, 103
Pheasants, Golden, hybrid, 288
Philadelphia International Exhibition, 297, 345
Philydrum glaberrimum, 431
Phrynium sanguineum, 251
Phyllocactus biformis, 276
Picea's leader renewing, 478
Pigeons—Barbs, 60, 129; selection in breeding, 398, 480; Carriers' instinct, 502; Club at Leeds, 302; common, 321; Dragoons, 131, 265, *versus* Horseman, 58; standard, 89; statement of Fancy, 173; feather incased, 174; homing, 110; Jacobin, 339; Mahomet, 303; Mr. Vander Meersch's, 262; nest for, 440; Owls, 129, 152, 225, 246, 265, 321, 341, English, 173, 303, 383, 393; Mealy Pouter, 21, 90, 130, 173, 209, classes of, 225; Pouters, 265, Mr. Bullen's, 397; Toys, 304; foreign Trumpeters, 302; Russian Trumpeters, 285, 359, 383; Turbit and Baldhead sick, 306
Pine-Apple Nursery, 331
Pine Apples, in the Bahamas, 314; culture, 58; leaves shrivelled, 244; management, 147
Pines, culture, 418; not fruiting, 300
Pinery, management, 101, 336; routine, 185
Pineries, temperatures, 12
Pinus pinsapo, insects on, 436
Pipes, for bottom heat, 18; depressing hot-water, 186; of earthenware, 170; joining hot-water, 95; jointing hot-water, 60
Pitcher, 300
Pitcher-plant, a hardy, 141
Pit, constructing propagating, 81; heating from kitchen boiler, 499; use of heated, 337
Plant-growing, 7
Plants, lists of new, 223
Plait, Sir Hugh, 252
Platycerium Wallichii and Willinckii, 313
Plum trees, pruning, 60; summer-pruning, 460
Podalyria calyptrata, 251
Poinsettia, cuttings, 149; for table decoration, 6; pulcherrima culture, 387
Poplar, Black, 351
Portsmouth Poultry Show, 108; awards, 129
Potatoes—American, 198, prizes for, 468; choice kinds, 92; diseased, 262; the disease, 280; new disease, 469, affecting American, 490, 497; young at Christmas, 396; Colorado Beetle, 171, 240; for main crop, 223; early, 37, 156, 164, 277, 430; late field, 389; for forcing, 108; encouraging improvement, 240; in 1874, 23; lime for, 300; notes on, 284, 250; relative notes, 157, 179, 216; planting, 277; protecting, 351; great produce, 97; size of sets and spaces, 50; preparing for sets, 101; cutting seed, 170; Royal Ashleaf, 141
Potato "The Disease," 493
Pots, desirable size, 17; economising, 285; painting, 18; porous garden, 416, porous, 451, 492
Potting, appropriate, 415; soil, mixing, 284, preparing, 155; stove plants, 59
Poultry account book, 173
Poultry—basket, 39; keeper, the, 4; in 1874, 60; run, grass for, 81; food, 90; keeping account, 128; and the season, 191; trespassing, 192; show expenses, 261; shows, coming, 285; fancier's dreams, 301; houses, building, 319; profits from exhibition, 337; keeping arrangements, 342; breeding pure, 421; at railway stations, 460; show schedules, 461; yard, 604
Primulas, 262; acaulis and its varieties, 332; hardiness, 283; sinensis sowing, 316; cortusoides amœna culture, 221, hardy, 890; culture of Chinese, 158; japonica sowing, 357; sowing, 458
Prioglea antiscorbutica, 276
Prizes, lawsuit to recover, 247
Propagating pit, heating, 127
Protecting fruit blossoms, 317
"Pruning, Grafting, &c.," 353
Pruning, neglected, 128; wall plants, 8
Pteris tricolor, culture, 81; from spores, 170
Pump, 206
Putty, soft, 127
Pyramidal fruit tree management, 36
Pyramids pruning, 186
Pyrethrums, double, 471
Pyrus, prunifolia, 276; japonica cuttings, 319

Quercus Ilex, 491

Rabbit—eating her young, 210; hutches, 67; management, 154; Mr. Firth's, 287; proof plants, 479
Rabbits, 46; green cards for, 480, 504; Silver-Grey, 502; eye inflamed, 504; at Northampton, 226; shrubs they do not bark, 378; deterring, 337; York Show, 305
Radishes in hot weather, 460
Railway liability for delaying fowls, 172
Rainfall at Weymouth, 96
Rain deficient, 25
Ransome, J. A., 376
Raspberries, culture, 168, 200; last year, 137; unfruitful, 13
Reading Poultry Show, 131
Red spider, 186; destroying, 477
Regent's Park, 370
Reports on poultry, 172
Rhododendrons, twelve hardy, 243
Rhubarb, culture, 329; forcing, 198, 284, tubs, 125; raising early, 127
Rhubarbs, 300
Ribbon border, 243; planting, 331
Ricinus communis, 278
Ridges, levelling, 170
Rockwork, plants for, 170, 296
Roller, blind arranging, 128; for blind, 13
Rollisson, Mr W., 496
Romanzoffias, 368
Roses—Admirable, 171; aphides and mildew, 419; for east aspect, 478; attar of roses, 129; budding, 498; for button-holes, 486; Marie Baumann, 77; climbing, 87, 71; cut-back, 425, 457, 472; cuttings, in open ground, 149, propagating by, 266, potting, 102; for cold place, 283; estimates of, 280, 373; exhibited by nongrower, 49; for non-exhibitor, 3 7; Fortune's Yellow, 347; fragrant, 4 8, 471; and frost, 284; under glass, 87, 50, 485; growing, 348; Felix Genero, 326; house, 283, shading, 378; leaves diseased, 460; Lyons Show, 416; on Manetti stock, 378; Maréchal Niel, 295; merits of, 292; Mosa de Meaux, 171; notes on some, 176, 334; Louis Odier, 171; W. Paul's, 346; portraits of, 433; in pots, 395; pruning, 127, 171; another requirement, 488; scented, 450; seeds, 395; mulch over roots, 223; selection of, 24; stock for, 262; Tea for border, 127; transplanting, 60, cuttings, 127; trees, and frost, 271, and intense cold, 230; for trellis, 900; for east wall, 148; for west wall, 420; weevil on, 396; white and cluster, 256, 280; in winter, 212; sweet-scented, 433
Ruabby Pigeon Show, 459
Rump abscess, 248
Russelia juncea culture, 280

St Austell Poultry Show, 151
Sales of plants, 294
Salvia patens culture, 816
Salvias for winter decoration, 467
Santolina culture, 81
Saponarias and culture, 354
Sarracenia purpurea, 81, 141
Savoys, Victoria, 262
Sawdust for flower beds, 60
Saxifraga, peltata, 368; Stracheyi, 272
Scale on Peach and Myrtle trees, 13
Screen, plants for, 262
Screws, fastening, 73
Scarlet Runners early, 156
Schedules of poultry shows, 479
Sea-kale—culture, 81, 499; crowns decaying, 128; after cutting, 243; earthing, 38; forcing, 58, 103, 198, 251, 262; planting, 170, 318, 435; pots, 102, 177; running to seed, 378; and Rhubarb tub, 146; long-stemmed, 277; tubs, 125, 167
Seedlings, raising, 204
Seed, old and new, 283; sowing, 124
Sempervivums, bedding-out, 419; seeding, 420
Senecio macroglossus, 161
Sewage, deodorising, 300
"Sewage Processes, Cost of," 493
Shading glass, 306
Shanking, causes and cure, 220
Sheep barking trees, 378
Show management and reports, 436
Shrub for centre of bed, 128
Shrubs, bare at base, 357; propagating various, 262
Slops, save the, 476
Smallage, 436
Smoke from kiln, 128
Snails and fruit trees, 374
Sneezing in fowls, 324
Snowdrop Tree, 420
Soapsuds for manure, 357
Soil, improving, 108
Solanum Capsicastrum culture, 283
Soot, &c., 185; salt, and lime manure, 171
South of Ireland Poultry Show, 64
Spalding Pigeon Show, 66
Spiraxis, culture, 283; not thriving, 262
Sparrows, 142; *v.* Gooseberries, 98; *v.* fruit-buds, 125, 126, 162; *v.* Carnations, 414; eating Peas, 288
Sphænogyne latifolia propagating, 206
Spring, In search of, 369
Squirrels egg-suckers, 227
Stacksteads Poultry Show, 381
Standards pruning, 186
Stangeria paradoxa, 94
Stanhopeas and culture, 238; tigrina, 239
Stanhope Poultry Show, 264
Staple in stone, 73
Stellingia sebifera, 5
Stephanophysum Baikiei, 141
Stocks, Night-scented, culture, 102; sowing, 834
Stony-soiled beds, 300
Stove, for greenhouse, 81; without flue, 300
Stratiomys chamæleo metamorphosis, 100
Strawberries—cankered, 283; care of fruit, 494; culture, 168; out-door, 36; early and late, 170; forcing, 77, 135, 178, 213, 222, 299, plants for, 487; unfruitful, 435, 498; house for, 40; planting, 281; protection, 457; for light soil, 59; syringing fruiting, 396; last year, 187
Street gardens and spring flowers, 335
Suburban gardening, 8, 36, 57, 77, 98, 125, 147, 168, 184, 204, 221, 241, 260, 281, 298, 316, 335 355, 376, 394, 417, 434, 458, 476, 496
Sunbeams, catching, 91
Sunday, birds at shows on, 186
Sunderland Poultry Show, 422
Swainsona Greyana and culture, 199
Swale, Mr. W., 394
Swans on the Thames, 480
Sweet Williams, planting, 223
Sycamore's bark dead, 357

Tallow Tree, 5
Tank heating, 499
Teas, 354
Temple Gardens, 374
Tenant removing shrubs, 38, 127
Thames Embankment, 369
Theropogon pallidus, 236
Thinning flowers and fruits, 425
Thompson, Mr. C. N., 7, 89
Thorne Poultry Show, 501
Thrushes, young cramped, 464
Thuja Lobbi from cuttings, 127
Tobacco in Algeria, 277
Tomatoes sowing early, 156
Toxicophlæa Thunbergi, 216
Tracing paper, 244
Tradescantia virginica and culture, 217
Trees, newly planted, 396, 434; pruning, 396; plants beneath, 127; removing large, 232; transplanting large, 275
Trilliums and their culture, 410
Tropæolum, canariense culture, 190; Minnie Warren, 167; tricolorum after flowering, 378
Tropical fruit culture, 161
Truffle hunting, 54
Tulip Society's Show, 455
Tulips, after bedding out, 396; Van Thol not flowering, 207
Tumour in hen, 424
Tunbridge Wells Poultry Show, 84
Turkeys, rearing young, 421
Turnbull, A., 75

Uaine and its ammonia, 136
Uvularias, 471

Vallota purpurea culture, 206
Vandas, 291; at Mr. Warner's, 394
Varieties, do they wear out? 26
Vegetables, for early sowing, 166 forced in pots, 433; selection of, 8
Veitch & Sons' Nursery, 158
Veitch's fruit prizes, 468
Veotilatiog, 300
Veratrums, 438
Veronica serpyllifolia *v.* grass, 72; under trees, 127; pinguifolia, 161
Viburnum Sandankwa, 496
Villa gardening, 8, 36, 57, 77, 98, 125, 175, 168, 184, 2 4, 224, 241, 260, 281, 298, 316, 335, 355, 376, 394, 4 7, 434, 458, 476, 496
Vinery, amateurs', 496; erecting, 12; management, 77, 317, 355, 394; insects in, 267; routine, 169, 205, 242; spare space in 12; plants for wall 228
Vines—removing bark, 4; bleeding, 222; breaking irregularly, 162; canes splitting, 436; Canon Hall as a stock, 81; coiling in pots, 38; culture, 282, in New South Wales, 394; cutting down, 141; desideratum, 12; dressing, 77; from eyes, 127; forcing late, 37; to fruit late, 102; grafting, 5, 318; for greenhouse, 127; Gros Gnillaume, 491; Black Hamburgh on open wall, 478; in cool house, 318; training in house, 38; inarching, 170, after, 876; injured, 318; leaves, blistered and scalded, 376, rough, 478, spotted and stained, 499; mildewed, 337; painting, 97; planting, 435; in pots, 169; pruning, 59; removing tendrils, 499; rods breaking irregularly, 337; roots grub-eaten, 319; scalded, 436; stopping, 337; training, 357; transplanting, 98, 72, 130, 144; in low temperature, 292; treatment, 394; on open walls, 491 weevil on, 283
Vineyard at Cardiff, 297
Viola montana, 378
Violets, 270; culture, 378; Neapolitan culture, 283; double white, 262; varieties and culture, 293; a new, 295; Neapolitan become single, 337; for spring bedding, 337

Wages at market gardens, 183
Wahlenbergia tuberosa, 286
Walks, making gravel, 281
Wall, evergreen for, 579; fruit for N.E., 207; tree protection, 170
Wallflowers, double yellow, 380
Wasps, queen, 233
Water-cresses, 396
Water, pure for animals, 153
Watering, 458; plants, 354
Waverley Poultry Show, 107
Weather, work and means, 25
Weaver, Mr. T., 74, 101
Weedy lawn, 357
Weeks, doings of last and present, 11, 36, 58, 79, 101, 126, 147, 168, 184, 205, 222, 242, 260, 281, 298, 317, 335, 355, 376, 394, 418, 434, 458, 477, 497
Wellingtonia gigantea, 123, 391
Wharfedale Poultry Show, 182
Williams'a, Mr. B. S., nurseries, 255
Willow grubs in shoots, 207
Window-boxes, plants for, 478
Window gardening, 298, 364; lectures on, 221
Winter Aconite culture, 159
Wistaria sinensis, 410
Wolstenholme, Mr. O., 383
Wolverhampton Poultry Show, 62
Woodlice, destroying, 357; in green house, 420
Worms in lawn, 127
Wright, Mr. J., 277

Xylopoda fabriciana, 202

Year's gardening, notes on last, 27, 95, 117, 166
York Bird Show, 502
Yucca's flowering age, 38

Zinc labels, ink for, 283; sashbars, 81

WOODCUTS.

	PAGE.
Alisma plantago	452
Alsophila Leichardtiana	495
Aquarium and flower-stand	479
Archerfield—Dirleton Garden	16, 30, 31
Areca Palm	35
Aspen's inflorescence	353
Aswarby Park flower beds	310, 311
Aviary, an	11
Bantam—silver-laced feathers	362
Barb Pigeon	61
Basket for fowls	99
Beeches, Burnham	220
Bee-feeding trough	361
Blackberry—Aughinbaugh	123
Blenheim Pippin	348
Bravoa geminiflora	369
Cages—prize bird	247, 305
„ moulting	399
Canary—London Fancy	286
„ Crested Norwich	360, 381
„ Yorkshire	441
„ Belgian	481
Carter's cup	472
Castor-oil plant	278
Cataaetum maculatum	373
Cerambyx heros	2 2
Cheanut tree, Mount Etna	122
Convolvulus major	320
Coop for hen	100
Coop for exhibition	106
Cuckoo fowl's feather	172
Cucumber-root disease	24
Culford Hall gardens	165
Cyclobothra alba	98
Dalkeith Palace	182, 203
Dendrobium cariniferum	414
Dieffenbachia brasiliensis	438
Diosma uniflora	387
Dorking cock	187
„ hen	224
„ Silver-Grey cock	245
„ Cuckoo cock	284
Dragon Tree	475
Epimedium alpinum	255
Euphorbia tree	296
Flower-garden beds	45, 488, 489
Fowl houses	319
Funkia lancifolia albo-marginata	6
Galeandra Baueri	315
Galega officinalis	411
Gas-heated boiler	178
Gerarde, John	145
Grafting, old cut of	79
Grapes, exhibiting	393
Hamburgh, Silver-spangled feathers	14
„ Pencilled	180
Hardwicke House garden	56, 57, 75
Harlaxton	229
Iris germanica	298
Jacobin Pigeon	140
Linden tree	144
Loxford Hall garden	474
Lunaria biennis	119
Markham, Gervase	572
Mascall, Leonard	78
Narcissus poeticus	140
Nolana lanceolata	297
Oak, Evergreen	432
Parkinson, John	494
Passiflora edulis	258
Peach houses	69, 71
Pigeon nest	440
Poplar, Black	352
Pot, artistic	415
Sarracenia purpurea	141
Seakale tub	125
Seed protector	180
Stanhopea tigrina	239
Stratiomys chamæleo metamorphia	100
Swainsona Greyana	199
Tradescantia virginica	247
Veratrum album	433
Wellingtonia gigantea	492
Window conservatory	365
Xylopoda fabriciana	402

LIBRAR
NEW YO
BOTAN C
GARDE

WEEKLY CALENDAR.

Day of Month	Day of Week	JANUARY 7—13, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises m. h.	Sun Sets m. h.	Moon Rises m. h.	Moon Sets m. h.	Moon's Age. Days.	Clock after Sun. m. s.	Day of Year.
7	Th	Royal Institution at 3.	41.7	30.1	35.5	7 af 8	6 af 4	40 af 8	19 af 3	○	6 35	7
8	F		41.0	30.8	35.9	6 8	8 4	19 9	34 4	1	7 1	8
9	S		42.2	30.8	36 0	6 8	9 4	47 9	56 5	2	7 26	9
10	Sun	1 Sunday after Epiphany. Linnæus d., 1778, æt. 71.	42.0	30.3	36.1	5 8	10 4	8 10	19 7	3	7 50	10
11	M	Sir Hans Sloane died, 1752, æt. 93.	41.5	30.1	35.8	5 8	12 4	23 10	43 8	4	8 14	11
12	Tu	John Ray died, 1705, æt. 77.	42.1	29.5	35.8	4 8	13 4	30 10	6 10	5	8 37	12
13	W		43.0	29.3	36.2	3 8	15 4	49 10	28 11	6	9 0	13

From observations taken near London during forty-three years, the average day temperature of the week is 41.73°; and its night temperature 29.77°.

PAST AND FUTURE.

I SIT down for the eleventh time to write the opening article of the volume of "our Journal," beginning with a new year. I might well be staggered at the thought. I might remember the case of Dickens, who after a few years ceased to write Christmas books, at least with anything Christmas-like in them; but I am comforted when I recollect the case of a gentleman who, at an agricultural gathering, made for twenty years the same speech, which was always well received, though addressed for the most part to the same audience. Now I have an advantage over that good man, for, although I have the same subject, I have a different audience—at least, a greater one each new year; for I know the circulation of this Journal is every year extending, and that this has been the case during even the just past year, in spite of its many and special opponents; and although the new little crafts—very little ones indeed some of them—start alongside, yet the old ship, christened by me long ago "our Journal," sails on bravely with more canvas and a bigger crew, and more interested in her welfare, and delighting in her welfare, than ever.

I have this year entitled my New Year's piece "Past and Future;" and at the beginning of a year I hardly know which we think of most, the past or the future, but I rather think the former. The wish of "A merry Christmas" uttered on a Christmas morning by laughing girls at a gladsome family gathering is realised, and just expresses the present feeling. Christmas is but a day or a tide, and its happiness is assured if the very day be happy. In its case the present only is thought of; but it is different in regard to the New Year's wish, "A Happy New Year." Of that there is a doubt, for it extends over 365 days. But apart from its uncertainty, I think at the opening of a year we think fully as much, or more, of the past year than of the coming one. We, delighters in the subjects dilated on in "our Journal," have even in this respect an advantage over many, for we are sure that our gardens and our fancies will give as much pleasure to us this year as in past years. We shall welcome the Snowdrop and the golden Crocus with as much delight as ever; we shall watch the spring flowers, aye, and the spring chickens (not, oh! epicure, on the table, but in the poultry-yard I mean) as gladly as in former years. Here we see the happiness that a taste gives, and a taste for Nature's productions is more certain of giving abiding pleasure than that of any art. The picture may tire, the landscape never.

Says a modern writer, "Few men who have distinguished themselves have been without a collection, or at least a taste. John Selden formed a library. The Duke of Wellington loved music. One of the greatest living statesmen is a judge of china. The first financier in Europe collects enamels. The busy man finds his greatest relaxation in such pursuits. Without being frivolous they afford relief from serious cares. Walpole and Richelieu formed galleries as refuges from affairs of state. It may be a question how far education neglects this subject. The early development of a turn for collecting is perhaps worth more consideration from those who bring up children than has yet been given to it. Monograms and postage stamps may in this way be among the civilising agents of our time."

Upon this subject of early developing a taste, a lady of position (known only to me through "our Journal" writes to me, "I began poultry-keeping for my elder boy and his brother, and have succeeded in giving to both a strong love for the pursuit." Thus so natural is the love of living things that the turn can be given if but early opportunity be afforded. The mother that gives a child a garden, the father that permits a Bantam or two in the stable-yard, or a few Pigeons over the stable, gives the turn by allowing the opportunity of its commencement, and so a life-long source of happiness is created.

As to collections, of the making of which the author above quoted speaks, there are other collections than pictures or china, or monograms. There are collections of Orchids, glorious to behold; there is the northern mechanics' collection of Auriculas, the lady's collection of Ferns. What a source of pleasure I have known these to be to the delicate or home-keeping! Then there are collections of choice poultry, and collections of fancy Pigeons. Oh, the pleasures all these afford, and the pleasure they have afforded to many of my readers in the past year, and are sure to afford similar pleasure in future years! Goëthe said, "You may know a man's character by what he laughs at." I would rather say, You may know it by what he privately delights in. The greatest have always delighted most in Nature. The great Bacon says, "A flower garden is the greatest recreation of the mind;" and he found his greatest relief, after being busied with high thoughts and projecting great works, was to be found in a quiet saunter by himself amid green foliage, and the unobtrusive humming of bees, and the sweet perfume of the flowers. A greater even than Bacon, the myriad-minded Shakespeare, turns his back on London to spend the rest of his life amid the gardens, and the meadows, the lanes of quiet, almost sleepy, Stratford-on-Avon, again to eye with delight

> "The pale Primrose,
> The freckled Cowslip, Burnet, and sweet Cloves.
> Daffodils,
> They come before the swallow dares, and take
> The winds of March with beauty; Violets dim,
> But sweeter than the lids of Juno's eyes
> Or Cytherea's breath; bold Oxlips, and
> The Crown Imperial."

All of which he sang in such grand verse while living in London, but remembering them in his country home in Warwickshire, to which he escaped as soon as ever he could, again to have his garden where doubtless he had, in his own words, in late summer the fairest flowers

> "Of the season, Carnations and streaked Gillyflowers,
> Hot Lavender, Minta, Savory, Marjoram:
> The Marigold that goes to bed with the sun,
> And with him rises weeping."

And if the greatest loved their gardens, so down the scale do the tired citizen, the busy country doctor, the tied-at-home tradesman (yet making home happy with flowers and pets), the mother with her group of little ones around her, and, too, those "unappropriated blessings" single ladies, in former years so jeered at by shallow-brained men, but now highly esteemed by all the good.

It is pleasant to see, after the long reign of small bedding plants, that a taste for the old border plants has revived—happily before they have all died-out of knowledge; and such papers as Mr. J. Wright's on Wallflowers and Stocks cannot fail to help on this revival. All knowledge is power, and more, all proper knowledge—*i.e.*, knowledge of good, brings pleasure; so that the man who first turns our attention to what is beautiful in Nature, or re-directs further attention to some half-forgotten flower, is doing good.

> "Sweet is the lore which Nature brings:
> Our meddling intellect
> Mis-shapes the beauteous forms of things—
> We murder to dissect.
>
> "Enough of science and of art:
> Close up these barren leaves;
> Come forth, and bring with you a heart
> That watches and receives."

I have often thought of the above beautiful lines during the past summer, which, beginning in April, at least to us in the west, was prolonged far, very far, into the autumn, as even late in November I counted above a hundred blooms of the Lamarque Rose on the south front of my house, perfect in form and equally as beautiful in foliage to those which July showed. It has been a rare season, this past one, for enjoying the foliage of trees, from the first green bud to the last golden leaves, as they stood and would stand week after week untouched by frost. So, too, has the past year, as far as I could judge, been favourable to flowers—a fine out-of-door summer, when week after week I have lived and read and even written out in the open air, listening to the soft summer breeze gently stirring among the leaves of the park trees as they stood knee-deep in the grass, and I felt the power of Tennyson's expression, "There is no joy but calm." Such of the past season.

And will not the future year be as joy-giving? I trust so. No doubt the pleasure derived from our gardens will be as ever a perennial one. This is well expressed in a small poem of Goëthe's, which, though our little children learn it, has the mark of a great genius—

> "Through the forest idly, as my steps I bent,
> With a free and happy heart, singing as I went;
> Cowering in the shade, I a floweret did espy,
> Bright as any star in heaven, sweet as any eye.
> Down to pluck it stooping, thus to me it said—
> 'Wherefore pluck me only to wither and to fade?'
> Up with its roots I dug it; I bore it as it grew,
> And in my garden-plot at home I planted it anew,
> All in a still and shady place beside my home so dear;
> And now it thanks me for my pains, and blossoms every year."

Here in little we have the gain of a garden—the wild flower placed there, and always to be seen, and in its season to meet us with its bright flowers. There is cheerfulness in a garden. How opposite this to the picture drawn by Goldsmith of the deserted garden, the garden gone back to a wilderness—

> "Near yonder copse, where once the garden smiled,
> And still where many a garden flower grows wild."

I love to see the wild reclaimed; but the once-civilised, as here described, to become again wild is sad indeed.

In that department of "our Journal" in which I personally take a small share with my pen, I may congratulate all exhibitors of poultry and Pigeons in the advance made by their fancy, evidenced by shows so attracting public attention that reports appear in the daily London papers of many shows, and which reports show some slight knowledge of the subject; which was not the case formerly, for no notice was taken of shows save in comic journals by way of ridicule, and the general writer knew not the difference of one variety from another. It is so no longer. These fancies have become general, and knowledge of them has become general too.

Novelists reflect very accurately the feelings and tastes of the generation in which they live. Fielding, by far the greatest writer of fiction in the last century (would that he had been a pure as well as a great writer), describes in one of the opening chapters of "Tom Jones," Prior Park House near Bath, the residence of Ralph Allen, who, under the *nom de plume* of Squire Allworthy, figures as an almost perfect English gentleman in its pages, yet mentions nothing about Allen's feathered pets; but we learn from Wood, the architect of Prior Park, that Allen instructed him to provide good accommodation for all his live stock, from his horses down, or rather up, to his Pigeons. "Within this superstructure," says Wood, after describing its architectural details, "the Pigeons are magnificently housed, and their particular cells are made with wrought freestone; so that if a beautiful habitation is really an allurement to this species of birds as some pretend, Mr. Allen's Pigeons will in all probability never desert their present place of abode. The tamer poultry," it is added, "are not less beautifully housed than the Pigeons." Of all this the novelist takes no notice whatever, although he accurately describes the house and park. Allen's Pigeons were also, evidently, only common birds kept for pies, not fancy Pigeons.

Now to show how the fancy has increased, we notice in modern days the lady who writes under the name of George Elliot, and is the greatest novelist living, makes a lady of rank say in "Middlemarch," one of her most recent works, "Take a pair of Tumblers for them. Little beauties! You must come and see them. You have no Tumblers among your Pigeons." And the good dame, a humble person, makes answer, "Well, madam, Fitchett shall go and see them after work. He's very hot on new sorts." The Pigeons meant were no doubt high-class Tumblers. Here the novelist exactly reflects the age, for turn to the catalogue of our Crystal Palace Show, you will find exhibitors of every rank from dukes and lords and ladies downwards.

I would wish in regard to poultry that utility should be more kept in view and more honoured in our schedules. Fancy is ruining some breeds of dogs; for instance, the fox terrier, who is actually not unfrequently no terrier at all, but a bastard-bred beagle. The judges demanding length of nose, and they have got it, but the earth-going terrier is gone, being no more a terrier than our show Dragoon is a Dragoon. The latter matters less, because a fancy Pigeon is not a bird of utility, though Pigeons should always be shown under their correct names, and a Horseman be called a Horseman. I hope, too, we shall not americanise our Game fowls by calling them "Games." Let our cousins do as they will across the water, let us keep to English names.

Lastly, I say, and say fully assured of its truth, that not only the subjects of our pages will give their admirers as much pleasure in the future year as the past, but this Journal will be in the future year, as in each past year, advancing in interest, position, and influence. It will go on as always calmly, steadily, and successfully, having

> "No fears to beat away, no strife to heal;
> The past unsighed for, and the future sure."

—Wiltshire Rector.

A NEW TYPE OF PELARGONIUM.

All horticulturists engaged with the cultivation of Pelargoniums, all amateurs of this beautiful genus, and especially those who are occupied in hybridising, know the hybrids of P. hederæfolium and zonale obtained in England by Wills and Peter Grieve by artificial fecundation. They know also that these hybrids seem to corroborate the theory of certain botanists, seeing that those that we know, and particularly Willsii, Willsii rosea, Emperor, and Dolly Varden are sterile; and that which is much more to be regretted is that they are superior to P. peltatum and lateripes by their great vigour and abundant blooming.

The horticultural world will therefore learn with pleasure that a plant of this strain, which produces an abundance of seed, has been found in the environs of Nice. According to a communication I have received it has been found in a bed planted with Pelargonium hederæfolium, having lilac white flowers, and P. zonale with red, white, rose, and buff. So far as I can judge by the branches and flowers which I have received it is a good hybrid between the two species, but tending by its habit more to hederæfolium than zonale, as it is decumbent. Nevertheless, the foliage is more in the way of zonale than that of the hybrids obtained in England: the flowers are red brilliant, and fifteen to twenty in a truss. The zonale has therefore exercised great influence in the fecundation.

Which is the plant which has produced the seed whence this remarkable and curious plant has come? We do not know, and perhaps never shall know.

This interesting plant is in the hands of M. Ch. Huber, florist, of Nice, who has propagated and will send it out next March under the name (an erroneous one I think) of Geranium pseudo-zonale; but the name matters little.

This is a plant that ought to attract the attention of all

those who are occupied with hybridisation, for who knows what may arise from this *species?* (No offence to certain botanists.) By judicious crossing a new section in the numerous family of Geraniaceæ may be created.

All amateurs know that with the old peltatums and lateripes the charming edgings round shrubberies, the hanging baskets of rooms, and the pillars of conservatories are decorated. I therefore advise all amateurs to make early application to M. Charles Huber, as the number he has propagated cannot be large.—Jean Sisley, *Lyons.*

SELECTION OF FRUITS AND VEGETABLES.

"What shall I do to be for ever known,
And make the ages yet to come my own?"

I will write an article on the selection of fruits and vegetables.

FRUITS.

Peaches.—I will begin with *old sorts:* Early York, Grosse Mignonne, Royal George, Violette Hâtive, Noblesse, Bellegarde, Frogmore Golden, Barrington. *New sorts:* Early Louise, Early Victoria, Early Alfred, Dr. Hogg, Early Ascot, Nectarine Peach, Princess of Wales, Lord Palmerston and Lady Palmerston. The next are under glass, late and very good—Albatross and Golden Eagle. The Early Ascot was raised by Mr. Standish, and all the other new ones were raised by Mr. Rivers.

Nectarines.—*Old sorts:* Downton, Elruge, Violette Hâtive. *New sorts:* Lord Napier, Rivers's Orange, Pine Apple, Rivers's White, Emmerton's White, commonly called the New White. I cannot leave these two classes of fruit without saying how much we owe to Mr. Rivers for prolonging the season.

Pears.—Beurré Bachelier, Beurré Clairgeau, Beurré d'Amanlis, Beurré Superfin (the best), Beurré Hardy, Beurré Diel, Williams's Bon Chrêtien, Conseiller de la Cour, Doyenné du Comice, Duchesse d'Angoulême, Louise Bonne, Gratioli, Josephine de Malines (one of the best), Marie Louise (ditto), Marie Louise d'Uccle, Thompson's. On trial, not yet proven—Souvenir du Congrès, Olivier de Serres, Pitmaston Duchess, General Todtleben, Madame Bonnefond, and Beurré de l'Assomption. Except Marie Louise they are all on the Quince stock.

Apples.—*Dessert:* Cox's Orange Pippin, Ribston Pippin (the two best), Kerry Pippin, Court of Wick, Blenheim Orange, King of the Pippins, Golden Pippin, Lord Burghley, Caraway Pippin (delicious), Boston Russet. *Culinary:* White Lion, Hawthornden, Blenheim Orange.

Cherries.—They are all on the Mahaleb stock. Early Lyons, Napoleon Bigarreau, Governor Wood, Empress Eugénie, Bedford Prolific, May Duke, Large Late Black Bigarreau. I have the Early Purple Guigne, but it requires glass.

Plums.—*Dessert:* De Montfort, Violette de Galopin, Green Gage, Transparent Gage. *Culinary:* Mitchelson's, Dove Bank, Belle de Septembre, Diamond.

Apricots.—Royal, Peach Apricot, St. Ambroise.

Figs.—White Marseilles, Brown Turkey, Early Violet. The first is the best. I have been obliged to give up Apricots and Figs, my gardens being too cold and exposed for them.

Grapes.—For a cold vinery.—Black Hamburgh, and the following delicious Frontignans—Early Smyrna, Primavis, Chasselas Musqué de Sillery, Early Golden, Early Auvergne, Early Silver.

Strawberries.—Black Prince, Duke of Edinburgh (Dr. Roden), handsome, well coloured, and fine flavour; Sir Joseph Paxton, Rivers's Eliza, Dr. Hogg, Mr. Radclyffe, Napoleon III. (Gloëde), not sufficiently known; Cockscomb, Wonderful, Galande, Red Alpine, Royal Hautbois.

Currants.—*Black:* Black Naples, Ogden's Black. *Red and White:* The old Red and White Dutch.

Raspberries.—Fillbasket, Red Antwerp, Fastolf.

Gooseberries.—Walnut Green, the best flavoured of all; Whitesmith, admirable; Red Warrington, a good finisher. For culinary purposes, Ironmonger.

I have many culinary Pears here, but I know only the names of two, and they are good—Catillac and Uvedale's St. Germain. Of this latter sort Mr. Bréhaut exhibited in London six Pears weighing 19 lbs. 14 ozs. One of them weighed 4 lbs. 4 ozs.

I do but little in vegetables.

Potatoes.—Royal Ashleaf, Veitch's Ashleaf, Yorkshire Hero, Lapstone, Taylor's Yorkshire Hybrid, and Bountiful (Fenn), a red kidney, rich and excellent. It is a good cropper, and it is the best-flavoured novelty that I have tasted for some years. *Potatoes for poor people.*—Early Rose, Gryffe Castle, and Red-skinned Flourball.

Cabbages.—Green's Early, Enfield Market.

Peas.—Ringleader, Veitch's Perfection, King of the Marrows.

Beetroot.—Henderson's Pine Apple.

Lettuces.—All the Year Round, or Sutton's Tom Thumb.

Celery.—Ivery's Pink Nonsuch, Veitch's Silver, and Sandringham.

Onions.—White Spanish.

Carrots.—The Long Horn.

Parsnips.—The Hollow-crowned.

Turnips.—Early Stone, not yet beaten.

The reader will not be disappointed if he selects out of the above lists.—W. F. Radclyffe, *Okeford Fitzpaine, Dorset.*

OUR BORDER FLOWERS—ACANTHUS.

Among our beautiful border flowers there is a family that appears to be quite neglected (or shall I say unknown?) to many of the cultivators of the present day. The family I allude to is the Acanthus. We have not many species; we have only five enumerated as hardy herbaceous, and I am not aware that we have a native of this family. Spain and Portugal are the places chiefly they inhabit.

They are plants of easy cultivation, and, when once established, last for a long time. They should have plenty of room. When crowded together they have no chance of developing themselves. I find them succeed best as single plants.

They require liberal treatment; a compost of good sound loam and leaf mould mixed with siftings of old lime rubble; a border broken up to the depth of 2 or 3 feet well incorporated with the above compost, and efficient drainage. They must be supplied with water when required, and they may have liquid manure water now and again when they are making their growth, for they are gross feeders. A sunny situation is desirable for their well doing.

When fully developed their beautiful holly-green spinous foliage renders them very attractive.

They may be increased by division, but that sometimes injures the plants, for, wounded by the operation, they sometimes rot off. I find the easiest way to increase them is by seed. The seed may be sown during the summer, the plants pricked out when large enough, and in the autumn or following spring they may be planted where they are to remain. When planted they should be made firm in their new situation. I prefer potting the young plants and plunging them in a cold pit or reserve ground, and planting as above. They are late-summer and autumn-blooming plants, from 2 to 3 feet high. They require staking to prevent the wind from twisting them about.

Acanthus mollis is, I believe, the commonest of the genus. A. spinosus is very desirable too, and the whole family are interesting. They are effective for centres of large beds, but more especially for shrubbery borders, and are all worthy of the cultivator's attention.

I have not seen them suffer from insects as some of our border plants do. The seeds may be obtained from most of our large seedsmen. We are told by some authors that the leaf of Acanthus mollis suggested the idea of Corinthian architecture; if so, it gave birth to the most beautiful.—Veritas.

MONT D'OR RUNNER BEAN.

The Bean referred to by Mr. Beater is, I presume, the Mont d'Or Butter Bean, which I have grown for the last twenty years. It is quite true what Mr. Beater says—when cooked it is only "a dirty yellowish green, neither yellow enough to look like marmalade, nor green enough to please the eye," but I have yet to learn that all our vegetables must necessarily be green, and that pleasure to the eye is preferable to pleasure to the palate. I can testify to the excellent flavour of the Butter Bean after many years' experience; and what is of much importance is, that unlike Dwarf French Beans and Scarlet Runners, it matters not how old the Butter Bean may be, it can be eaten pods and all, without stringiness and without parchment lining, the latter of which it does not possess.—P. B.

Mr. William Paul's Show of Roses in Pots, Pictorial Trees, Geraniums, &c., will this year be held in the Royal Botanic

Society's Gardens, Regent's Park, from the 3rd to the 10th May inclusive.

LILIES.

I PRETEND to not one atom of scientific knowledge on this beautiful tribe of plants. I could not allocate any new species to its true position in either the Isolirion or Eulirion group, but I do pretend to a great love for the whole family. From my very earliest floral days I have delighted in them, and it rejoices me now that they are once more coming to the front. Collectors are adding to our lists, or re-introducing species that have either gone out of cultivation or become scarce; and although exhibitors have not brought them forward liberally (and they are not easy plants to send any distance), yet we may rest assured that if the taste for their culture progresses, and some of our metropolitan growers take them in hand, we shall see them in greater numbers than we have hitherto done.

Amongst those who are busily engaged in adding to our stores are Mr. Bull of Chelsea, and The New Bulb and Seed Company (late Tentschel & Co.) of Colchester, while Lily sales at Stevens's are a regular feature of the season. In these sales Auratum still holds the prominent place, and is undoubtedly the most popular of the tribe, although personally I do not give it that position. Amongst the Lilies which have been lately introduced by the Colchester firm it may be well to mention Lilium dalmaticum, belonging to the Martagon group, a large quantity of it having been collected by Herr Max Leitchlin of Carlsruhe, and forwarded to them. It is of an intense deep purplish colour, and until the present time has been comparatively rare in our gardens; and L. neilgherricum, a fine plant of the longiflorum type, and gathered near Ootacamund, in the Neilgherries, at an elevation of about 8000 feet. It is, undoubtedly, for the form of its flowers, one of the very finest species of this widely distributed genus, and is well deserving of the notice of all lovers of the tribe. It was exhibited, I believe, some twelve years ago by the Messrs. Veitch, but has not been seen since. Mr. Bull has also a very scarce Lily from Santa Rosa Island (Bloomerianum oscellatum), of which I know nothing, but hope to make its acquaintance this season.

Lilium Humboldtii is a grand species. I was greatly charmed with a fine plant of it I had last year. There is something peculiar in the shade of orange yellow, it is very clear, and the claret-coloured spots add greatly to its beauty; it varies very much in the markings. Already we have maculatum and punctatum, and doubtless other varieties will be found. It is a robust-growing form, and bears from fifteen to twenty blooms. I dare not, in the presence of such a grower of Lilies as my friend Mr. Wilson, say anything of culture, in which he is a master, and I only give these few observations, as they are indications of the favour into which the tribe is coming.—D., *Deal.*

REMOVING THE OUTER BARK OF VINES.

I CAN endorse the opinion of your correspondent, Mr. J. Wright, respecting the peeling of Vines. I do not approve of the practice.

In my younger days, by the order of others, I have spent weeks in peeling and painting with the abominable admixture of sulphur, soft soap, clay, &c. At the time I remember, too, that I could not come near a fire without causing a most disagreeable odour to all present. I determined that, should it fall to my lot to have Vines in care, I would, if possible, dispense with that obnoxious practice.

It appears to me to be an unnatural process to strip off what was intended for a protection. A gentle rub with the hand is sufficient to remove the loose bark, and beyond that point I attempt not to go.

I have known Vine buds injured by the process of scraping, as it used to be termed. For more than twenty years I have dispensed with that practice.

Years ago I was asked for the best destroyer of red spider. "Do not have to deal with it," was the reply. But how to manage? inquired the man of sixty years of paring, painting, &c. By giving pure air, pure water, and a judicious use of the syringe, for I believe in syringing, and have a good soil for the roots, with careful attention to the same.

I remember when the first bunches of the far-famed Lady Downe's White and Black Seedling Grapes were cut from Vines growing in an outside border, the rods in a nursing Pine pit. The border outside was concreted, and had not a drop of water for three years. A gentle heat was kept up by fermenting material on the concrete during February, March, and April, and longer if found to be needed. The soil of the neighbourhood was of a strong retentive nature; being in close proximity to the river, on that account less water was wanted. I mention this circumstance that others may have an idea what is being done by others; we cannot all be guided by one and the same rule.—H.

BIRMINGHAM HORTICULTURAL EXHIBITIONS.

MR. QUILTER, proprietor of the Lower Grounds at Aston, has made a generous offer to some of the public institutions of Birmingham. Last year he began a series of horticultural exhibitions on a scale equalled only by those of the Royal Horticultural Society, and conducted with the same completeness as the Show of that Society held at Aston when Prince Arthur visited Birmingham. Mr. Quilter proposes to continue these exhibitions for the benefit of public institutions, in which he feels a strong interest. He proposes to take upon himself the whole cost and risk of the exhibitions, and then to share the profits with the selected institutions, after the expenses are paid. The exhibition of this year will be for the benefit of the Birmingham Institute, that next year for the Sanatorium, that of 1877 for the School of Art—leave being reserved for the Queen's Hospital to take 1878; or otherwise, if the movement proves successful, the rotation above mentioned will be repeated. In return for his offer Mr. Quilter stipulates for the formation of a General Committee from the Committees of the institutions named, with the addition of other gentlemen who may be disposed to assist. We do not believe in the possibility of failure if the scheme is properly supported. There is a growing demand for horticultural exhibitions on a really important scale, the Lower Grounds afford unusual opportunities for holding them, Mr. Quilter himself has acquired great experience in their management, and with these advantages, combined with hearty work on the part of the Committee, there is no reason why a large profit should not be realised for the institutions which have consented to accept Mr. Quilter's proposal. That the proposal itself is very generous requires no proof; and we hope the public will by liberal support enable Mr. Quilter to realise his liberal design. The first exhibition will be held on Thursday, July 1st, and on the following Friday, Saturday, and Monday for the benefit of the Midland Institute Building fund; and the details of the arrangement will be shortly announced.

COLLETIA HORRIDA.

I WAS much pleased with the article in your Journal (page 562) relative to Colletia cruciata, as I am quite sure the Colletias are not half so widely known or cultivated as they should be.

It may be interesting to your correspondent Mr. Robson and others to know that C. horrida, when well established, flowers much more profusely than cruciata; and as it also flowers much earlier in the season than that species, it is less liable to be injured by frost. Besides, it has time to mature its seeds, which it does here by thousands in favourable seasons like that just past.

On referring to London's "Encyclopædia of Trees and Shrubs," the berry is there described as whitish; here the seed vessel is three-celled with small black seeds, seedlings from which come up in a few days if sown in pots and placed in a little bottom heat. Cuttings of C. cruciata strike readily in a little sandy loam and peat, and placed on a little bottom heat; but I have failed in striking C. horrida under the same circumstances.

Many trade plant catalogues mention four varieties of this curious plant—Bictonensis, cruciata, horrida, and ferox. In justice to the public who may be desirous of getting these plants, these names should be reduced to two—viz., C. cruciata and C. horrida, as the first and second named are undoubtedly the same, and the difference of the third and fourth, if any, is so little that it is not worth retaining the two names. There is a large bush of cruciata here about 30 feet in circumference and 8 feet high, and also one large bush of horrida about the same dimensions.

The Colletias are not particular as to situation, but no doubt would prefer a dry one, although we have some growing remarkably well in swampy places, and where they have been deluged for days with sea water uninjured.—W. Osborne, *Co. Cork.*

VINE GRAFTING.

The following facts may be interesting to Mr. Grieve. I inarched a Muscadine on a Madresfield Court, the former being in a pot, the latter in a large tub. I am not referring to an experiment I related in this Journal some few months back—*i.e.*, "the causing of oval Grapes to become spherical." After two years I cut away the Muscadine. The year after the Madresfield Court produced spherical berries, and although very sweet and luscious, there was no Muscat flavour. I am now trying an experiment with the Muscadine which was cut away. The Madresfield Court graft has grown a long rod. The Muscadine has thrown-up a rod below this graft. I have now inarched these two rods. It will be interesting to watch what Nature will now do.

The Golden Champion grafted on the Black Hamburgh has done remarkably well with me this year; the berries and bunches very fine, and no spot. I had intended cutting this Grape down, but Lord Calthorpe, who has also been very successful with it, advised me not to do so. A Black Alicante grafted on this Grape has for two years borne berries and bunches precisely the same as when on its own roots.—Observer.

MESEMBRYANTHEMUM CORDIFOLIUM VARIEGATUM.

I have found this to do well under the following treatment:—In the autumn I take as many 6-inch pots as may be required, fill them nearly half full of drainage, covering the drainage with charcoal, and the charcoal with moss. Then, putting a little sandy soil in the pots, and 1 or 1½ inch of fine river sand, I plant the cuttings round the edges of the pots, and a few in the middle; after a good watering, I set them in a cool vinery, partly shaded, kept moderately dry. They root soon and do well, and, potted-off early, they afford plenty of cuttings in the spring. They should be kept free from drip and damp, for both are fatal to their well-doing.—H.

ANTS AND IXORAS.

Permit me to express a doubt as to the ants having attacked and barked the Ixoras of "S. J. A." May he not be mistaken? This morning I was in one of my stoves, and having just read "S. J. A.'s" letter, I watched with some curiosity some ants upon a young Ixora. In the fork of one branch I saw a small mealy bug and a scale close together. I killed them both, but left them there to see whether the ants would touch them. I was not kept long waiting. One of them raised the dead bug, and carried it off down the plant on to the soil of the pot, and then disappeared, I assumed, to its nest. Another ant grasped the scale several times, but ultimately left it, from which I concluded that its flavour did not meet with approval.

Now in the same house I have several fine specimen Ixoras, on which I often notice ants creeping, but no damage is done to the bark, or indeed of any kind; though I am bound to add the ants are not numerous. The woodlice, I suspect, are your correspondent's foes.

The Rev. J. G. Wood, in his "Illustrated Natural History," says that ants are easily destroyed by pouring boiling water or naptha into their tunnels. I need hardly warn your correspondent to be careful how he applies this remedy to a plant in a pot.—T. M. Shuttleworth, F.R.H.S."

CUCUMBERS.

Recent articles on Cucumbers have been very interesting, but they do not explain why I have not been successful with a temperature under 60°. I have always found them thrive better over than under that temperature. For the last three years I have had great trouble with what I suppose is the ambury. They grow and flourish very well for about three months, when by degrees the roots all get knotted, the foliage cannot stand any sun, and the plants soon wither away and ultimately die.

My Cucumber bed is tank-heated, and covered with ridge tiles, over which are laid slabs. The drainage is good. I have tried all kinds of soils—turfy loam, loam and peat, brick earth, leaf mould, and rotten dung, with and without the addition of lime, soot, and charred material. The soil I have had from different places on the estate five miles apart. I have had the house washed with clean water, and all kinds of nostrums mixed with the whitewash, but all seem to suit the disease much better than some of them have the plants.

I usually grow Telegraph, and have bought seeds from long distances, and likewise obtained them from friends, to see if a change would do any good. I usually have grown two crops in a year, and used never to be without a Cucumber, but this year my winter crop went off sooner than ever. If anyone can give me advice I shall be very pleased.

We ought to chronicle our failures as well as our successes, and for the present this is my failure. I may mention that club-root is not at all prevalent here in the garden.—John Platt, *Norfolk.*

[We sent the specimens of the roots which you enclosed to a well-known naturalist, and the following are his notes:—"They are a diseased condition of the cellular tissue, caused by the presence of minute worm-like infusoria called vibrios, creatures common in decomposing infusions, &c. We have carefully examined your roots with the microscope, and the vibrios as originally described by the Rev. M. J. Berkeley are present in abundance from the egg state upwards. The correctness of Mr. Berkeley's observations has been questioned, but we are fully able to confirm their positive accuracy, borne out not only in this instance, but on former examinations of these singular nodosities on Cucumber roots. It is much easier to examine and describe a disease than effect its cure. The recommendation generally is to utterly destroy all the diseased roots and the surrounding soil.—W. G. S."]

SOME OF THE VEGETABLE PRODUCTS OF CEYLON.—No. 6.

Gamboge of excellent quality has been produced, and has been pronounced by competent authorities equal to the finest (Pipe) Gamboge of Siam. The tree from which it is produced in Ceylon is called the Gokotòo Gamboge. Dr. Christian of Edinburgh wrote to General Walker (at that time Deputy Adjutant-General in Ceylon), to the effect that the Ceylon Gamboge might be made to compete in the European markets with the finest qualities from Siam if more care be taken in collecting it and making it up.

The Ficus elastica, or the Indianrubber Tree, grows luxuriantly throughout the central province. It is propagated by cuttings. The juice is collected from incisions made in the tree, and is placed in an earthen glazed vessel some time; water is then added to it, and both are allowed to remain for forty-eight hours. The latter is then drawn off, and a small quantity of arrack (about one-sixth), is added, and the vessel is well corked and covered over with canvas painted with the juice as it exuded from the tree. The extension of the cultivation of this valuable tree in Ceylon, it would appear, would be highly desirable, and Dr. Thwaites is instituting experiments with the Assam caoutchouc-producing tree.

The Palma Christi is found over the greater portion of Ceylon. Mons. Bois, a French chemist, has made some important discoveries in Algiers, and has found that a piece of ground there will yield three times as much oil* as olive oil, and twice as much as palm oil. By distilling castor oil upon concentrated potash the sebacic and caprylic alcohol are extracted as separate products, which may be turned to good account. Sebacic acid can be employed in the manufacture of candles,† and caprylic alcohol can be used in illumination and in the composition of varnishes.

Dr. Thwaites reports that the printing for distribution of some simple instructions for the planting of this valuable plant and the preparation of the seeds for the market has had an excellent effect. He further reports that amongst both European and native gentlemen possessing land at low eleva-

* There are numerous other valuable vegetable oils in Ceylon.

† If the Tallow Tree of China (the Stellingia sebifera), which forms a very large trade in the southern parts of China, were introduced into Ceylon, it might probably prove of great importance to the colony. At Shanghai a large sum is realised annually by the cultivators. For burning the tallow is excellent; it gives a clear, bright, and inodorous flame, and is without smoke. The timber is white and close-grained, and well fitted for printing-blocks. The leaves, too, are valuable as a dye. The tree is raised from seed, and grows with great rapidity. Its properties as a lubricator for railway machinery have been tested, I have not learned with what success.

tions a disposition is being shown to take up Chocolate cultivation. All the seeds produced this last season from the chocolate trees growing in the Péradeniya garden have either been disposed of to purchasers, or plants have been raised from them for increasing our own plantations. There is so little difficulty attending the cultivation after the young plants are once established, and the fruit would soon be found to furnish so agreeable a beverage to the native cultivator himself, that it may be fully expected that in a few years this plant will in very many of the Cingalese village gardens take the place of Coffee—that is, in situations too low for the healthy growth of the latter.

Fodder Grass.—Dr. Thwaites mentions that he is distributing the seeds of the Paspalum conjugatum, which is likely to prove valuable feeding for horses and cattle.

I think I have now touched upon all the principal vegetable productions of Ceylon. The colony has been singularly fortunate in having had a succession of able governors, an energetic body of planters, ever prepared with their brains and money to develope its productions, and last, but by no means least, has had the inestimable advantage of a free press, without which the prosperity of a colony cannot, in my humble judgment, be legitimately insured.—E. Rawdon Power, F.R.G.S., *Ceylon Civil Service (Retired), Tenby, South Wales.*

POINSETTIA PULCHERRIMA FOR TABLE DECORATION.

Plants for the purpose of table decoration, like many other things, must not be presented too often, or they lose their power of pleasing, and, of course, of giving satisfaction. Now, where two or three plants are required each evening, it becomes a matter of much importance to the gardener to have always on hand a good variety in a presentable condition for this purpose. With this object in mind it has occurred to me that a few remarks on this subject would not be unacceptable to many of those gardeners who have to keep up a constant supply of such plants.

I would put in a special plea for a plant which is seldom seen on the table, I mean the Poinsettia pulcherrima, which, when carefully and judiciously trained, is one of our finest and most attractive plants for table decoration. The following method has been practised here for some time, and the result has always given entire satisfaction to all concerned:—When the wood is sufficiently ripe select the required quantity of the best pieces, cut them into lengths of about 2 inches, stick them into thumb pots filled with loam, leaf mould, and silver sand, one part of each; water well through a fine rose. Plunge the pots into a gentle bottom heat, where they soon strike root and burst into leaf: not more than two shoots are allowed to grow on one plant; if more be allowed they cannot, of course, be expected to mature such fine heads. When well rooted turn them out of the cutting pots, shaking off a little of the soil: select three of equal growth, and place them in a triangular form in a pot sufficiently large to contain the three balls comfortably. The compost used is made up of fibry turf, leaf mould, sand, and sheep manure. The pots are then returned to their old quarters and shaded for a few days, where they remain until another shift is necessary, when they are finally moved into 8-inch pots—this being a convenient size for the vases generally used. Towards the latter end of May is a good time to give the last shift. They are then placed in a cool frame, and a little balloon-shaped trellis about 14 inches high and the same in diameter is placed on each pot; the shoots are then carefully trained on the trellis. The shoots should not be allowed to grow more than 3 inches without being tied, otherwise they are apt to crack and bleed, to the great injury of the plant. The only further care required is a liberal supply of liquid manure.

About the latter end of September they are taken into the stove, where they develope their great scarlet heads, each measuring from 10 to 14 inches across. Six of these flowers, along with the rich green foliage of the plant—none of the trellis being discernible without close scrutiny — make a magnificent show on a table, with one of those noble-looking Ferns, Adiantum farleyense, placed at a distance on each side. —R. C. (from *The Gardener*).

Larks Garden-marauding.—During the late sharp weather the larks have attacked the Broccolis and spring Cabbages with a severity I have never before witnessed. Sprouting Broccoli have been literally stripped, and a bed of some seven thousand promising spring Cabbages have been nearly or quite spoiled. I hope other parts of the country have not suffered in like manner from the ravages of these birds. — J. A., *Netley, Hants.*

FLOWERS FOR OUR BORDERS.—No. 46.

FUNKIA ALBO-MARGINATA.—White-edged-leaved Funkia.

The genus Funkia, separated from Hemerocallis by Sprengel, comprises four species and several varieties, all of which are well deserving of cultivation, especially those forms possessing variegated foliage, of which Japan, the country *par excellence* of variegated plants, has furnished us with a notable contingent.

Fig. 1.—Funkia lancifolia albo-marginata.

Of these the variety here illustrated may be taken as a type, though not perhaps the most striking one. We preserve the name under which it was originally published, but it has been reduced by Mr. J. G. Baker, a very competent authority, to the rank of a variety of F. lancifolia; and the various handsome forms of the so-called F. undulata, so valuable for decorative purposes, are also regarded as mere varieties of the lancifolia.

The Funkia albo-marginata is a hardy herbaceous perennial, producing numerous radical lance-shaped leaves in a tuft; each leaf is from 2½ to4 inches long, with a channelled petiole of about the same length; while young, the margin is slightly tinged with yellow, but it ultimately becomes pure white, increasing considerably the attractions of the plant. The scape, or flower stem, is about 18 inches high, and bears from ten to fifteen blossoms of a pale violet blue, and about 2 inches in length, including the short peduncle. Each blossom arises from a pointed bract one-third longer than the peduncle. Although the bracts are arranged spirally round the stem, the flowers face only in one direction; whilst in bud the flower is inflated in its upper half, and when expanded displays six spreading lobes. Both stamens and style are what is termed declinate—that is, instead of occupying the centre of the flower as in most plants, they all incline to one side, which in this case is the lower one; whilst in bud they are quite straight, but after expansion the extremities both of stamens and style curve inwards, as in the Alstrœmerias. It blooms in August, continuing in flower three or four weeks, several spikes being produced in succession. It grows freely in ordinary garden soil, and is quite hardy. In most seasons it ripens plenty of seed,

from which it may be increased; but the readiest method of propagating it, is by dividing the roots in October.—(*W. Thompson's English Flower Garden, Revised by the Author.*)

PLANT-GROWING—SIZE OF POTS.

Growing plants in pots to a state of the highest possible perfection, requires an amount of attention and care which is not requisite to the same degree for any other of the duties devolving on the gardener. Where high-class plant-growing is attempted, an uninterrupted watchfulness is necessary as regards watering, shifting into other pots, and exterminating, or, better still, preventing, of infesting insects; and even with these indispensable wants fulfilled to the letter, such seemingly unimportant items as feeding, pinching, tying and staking, position of plants whilst growing, and such like, may render entirely null all the previous care and work spent upon them. That some members of the profession have a natural aptitude for plant-growing there is no reason to doubt; at the same time, it is an aptitude that may be acquired by a patient study of the habits and observance of the treatment most suitable for the different subjects coming under the plant-grower's care. This aptitude for plant-growing, which is synonymous with a knowledge of the wants of plants when confined at root to the limits of the flower pot, applies to all the varied genera cultivated in pots, whether these be soft or hard-wooded, fruits or flowers. The idea that, compared with others, some classes of plants are more easily grown, such as Chrysanthemums or Cinerarias, as compared with hardwooded Heaths, Leschenaultias, or such-like, is to some extent correct, but to a great degree erroneous and misleading. The Chrysanthemum anybody can grow, or get to exist, as it happens in too many cases, but it is not everyone who can "do" it to perfection; and though the amount of skill and care required to grow it well is not such as an Erica requires, yet, to a great extent, it differs only in degree. The slightest knowledge of plants will enable anyone to flower the Hyacinth; but it requires something more to extract all the flower possible out of the bulb. Again, Orchids will exist under the worst treatment; but comparativelyf ew understand them thoroughly. To turn to fruits—Strawberries, Grapes, Peaches, Pines may be grown in pots by the merest tyro; but the best results are only attainable by those conversant with these subjects. So we might go on to enumerate examples *ad infinitum;* but enough. It will be more profitable to call attention to a few general principles applicable to plant-growing in pots, and without which satisfactory results are very doubtful, if not impracticable. One of the main principles of successful plant-growing centres in the size of pot, for by far the great majority of plants do best in comparatively small pots. It is quite possible, for example, to cram sufficient soil into a pot not exceeding 8½ inches in diameter at the widest part, by 8 in depth, to grow many soft-wooded plants to the greatest possible perfection. Last summer we saw some specimens of Show Pelargoniums perfect in every respect, and from 2½ to upwards of 3 feet through, with the roots confined in 6 and 7-inch pots: it requires one to be no novice who can attain to results like these. At this time we wish to draw attention more particularly to growing pot plants for home use without trenching on those for exhibition, and would respectfully ask those who have been used to giving liberal shifts to small plants to treat them to less in quantity, though the quality may be more looked to; but even if the quality of the potting material may be poor, it is better to feed when the pots are getting filled with roots than to give them such a quantity of soil as they never appropriate.

Commonly-grown plants, which do better in small pots than large ones, are Primula sinensis, P. amœna (Sieboldii), P. japonica, P. denticulata; all the species of the Pelargoniums, Show, Fancy, Zonal, Double or Variegated; Cinerarias, Pompon Chrysanthemums, Petunias, Phloxes, Carnations, Picotees, Pinks, Cyclamens, double Wallflowers, Salvias, Stocks, Mignonette, Bouvardias, Calceolarias, Hyacinths. Of plants requiring a stove temperature (such as Aphelandras), Euphorbia jacquiniæflora, Justicias, Eranthemum pulchellum, Poinsettias, Thyrsacanthus rutilans, Clerodendron fallax, may be all grown into nice serviceable plants in 6 and 7-inch pots. Amongst hard-wooded plants, Ericas of the Hyemalis type, melanthera, hybrida, Epacrises, Azaleas, Cytisus racemosus; Acacias, such as grandis, armata, and Drummondii, make nice plants when properly treated in these sized pots. Orchids, Tillandsias, and plants of this class, and Nepenthes, should always have small pots or baskets for the size of the plants.

But there are plants which require liberal treatment at root as regards size of pot, in order to attain perfection in their cultivation. Plants of this class are Lapageria rosea and L. alba, Bougainvillea glabra, Clerodendrons, Allamandas, and climbing plants generally. Ferns, such as Gymnogrammas, Adiantums of the trapeziform type, Davallia Mooreana and pentaphylla—Tree Ferns. Many stove foliage plants, as Dracænas, Crotons, but more especially Alocasias, Marantas, Anthurium Scherzerianum, and others of this genus. Palms also, though they do well, many of them, in comparatively small pots if well fed, are very fond of liberal shifts. Fuchsias are fond of a large pot to the size of plant, though it is quite possible to grow neat plants in small pots. With regard to fruit culture in pots, as good results are obtainable with small pots as with large ones. Strawberries grown in 7-inch pots will be no better than those grown in 6-inch, and for early work 5-inch pots. In the case of the Pine Apple, it has been demonstrated in many instances that as good fruit may be grown in pots 10 and 12 inches in diameter as in those of 14 or 16 inches. With pot-Vines, 10-inch pots are found as useful as those 3 or 4 inches wider; and it is doubtful whether the many failures in growing Peaches in pots may not be attributable to growing them in those of too large size.

These are merely hints thrown out to be appropriated by those who see anything worth noting in them. There are, of course, many things omitted which may be filled up in practice, as in the case of plants like the Dracæna and Croton, which, in some of their sorts, are indispensable grown in small pots for decorative purposes; but for these plants, as they increase in size the liberal treatment here recommended must be resorted to. For the great majority of cultivated pot-plants a restricted space at root is one of the first conditions necessary to their successful cultivation. It seems scarcely necessary, so often has it been insisted on, to say that all plants lifted from flower bed or border, to be wintered in pots, should absolutely have their roots crammed into as small pots as possible. Space will not at this time permit a glance at any other of the essentials to be observed in plant-growing.—R. P. B. (from *The Gardener*).

MR. CHARLES NORVAL THOMPSON.

Amongst those who administer to the necessities of the horticultural world are men of very differing stamp—some who are well known to fame either by their practical efforts in advancing the culture of the many objects that interest, or by their pens wielded on its behalf; while there are some who unobtrusively do their work and, save a few persons, no one knows of the value of their labours. One of the latter class is the subject of this brief notice, one to whom the readers of the Journal are more indebted than they are aware of, for to his careful and painstaking labours they owe those reports of our metropolitan shows which have certainly not been exceeded by any gardening journal published. More, perhaps, than anyone, save the Editors themselves, I have been thrown into contact with him, and have ever admired the quiet, modest, and thorough way in which he did his work. His attainments were of no ordinary character, and he knew a great deal more than more pretentious men; but he never obtruded his knowledge; it was only by conversing with him that it came out.

He has died young, and, like many others, had not time to make provision for his young family. He had, I believe, insured his life for a small sum, but beyond that he left nothing. Am I wrong in supposing that there are many readers of the Journal who would be willing to aid in anything that might be suggested on his behalf? An effort must be made to get some of his children into an orphanage, and this cannot be done without money, as I know from experience; and if the Editors would consent to receive subscriptions I feel sure something could be done, and it would be to me a melancholy pleasure to aid it in my small way. He was a Christian man, and therefore he has still stronger claims on many of us.—D., *Deal.*

[We have now before us the testimonials of our horticultural contemporaries, and of one who well observed him, to the worthiness of our late sub-editor. Not one word in those testimonials is an exaggeration. Mr. Thompson was a well-educated man, quiet, unobtrusive, indefatigable, and ever mindful of the interests of this Journal. We have lost by his death a staunch friend and able assistant. Mr. Thompson came of a family of gardeners who held the highest positions in their day. His maternal grandfather, Mr. Norval, was long gardener at Raith, in Fifeshire; his paternal granduncle was

gardener to Mr. Skene, of Skene, in Aberdeenshire; and his father was the well-known and much respected pomologist, Mr. Robert Thompson, who superintended for so many years the fruit department of the Royal Horticultural Society at Chiswick. He died on the 23rd December last, aged forty.—THE EDITORS.]

NOTES ON VILLA AND SUBURBAN GARDENING.

A SUDDEN, and to all appearance a general, thaw having set in with the glass standing high, giving a promise of open weather for a time, and as operations have been suspended for a time through the snow, which has pretty well all disappeared, this opportunity must be taken to proceed with all work yet unfinished, such as pruning and nailing, not only fruit trees but also plants growing on walls and houses for ornament. I allude to such things as Jasminum nudiflorum, Lonicera or Honeysuckle, Magnolias, Clematis, Chimonanthus fragrans, Bignonias, Virginian Creepers, Corchorus japonicus, and the Pyrus japonica, and several sorts of Roses. All the above are deciduous, and are commonly met with and used for adorning walls or houses in the suburbs of towns and elsewhere. The principal idea to bear in mind in pruning is to extend the medium-sized and well-ripened shoots over the space to be covered, but not lay them in at their full length, or unless they are exceedingly vigorous and the shoots not numerous, the eyes will only break into growth here and there, leaving blank places to be filled-up on a future time, which is not the most satisfactory. Prune the shoots back to half their length, or what is better, is to be guided by their strength, leaving the strong well-ripened wood longer than that of the weak. This will induce the one to break strong and the other weaker, so as to bring an equal balancing of the growth throughout the tree. As I say, see to this first, and then turn to the thinning of wood in the thickest places. This operation is not needed every year, but it is well known that where such things grow fast they are liable to become matted, or so much entangled in their shoots here and there as to make them look remarkably unsightly, especially as by allowing this freedom of rambling they become thick as a bush at one place, and the other parts of the plants are comparatively bare. This shows a want of attention and bad management. In thinning-out the shoots in the thick places they should be cut entirely out and not spurred, or there is a chance of their becoming thicker still; but in the thin places where more wood is needed the shoots should be spurred. They then break into growth, and in time the plant is well and evenly furnished with medium-sized shoots, which enhances its appearance very much. The Bignonia radicans, being a coarse-growing plant, and producing its clusters of bloom at the extremity of the current year's growth, must be spurred-in all over except where shoots are wanted, and then they ought to be shortened. Then there is the Jasminum nudiflorum in flower at this time, therefore the pruning or thinning must be deferred. There are several others which produce numerous fine shoots, such as the Chimonanthus, Elæagnus, and Virginan Creepers, which it is necessary to leave, not only for the flowers but for the principal object of clothing the wall more effectually. The decidnous kinds of Magnolias too, which throw out such beautiful large flowers, are also generally vigorous growers; but at this time of the year the flower buds may be seen at the extremity of the shoot, so that in pruning this will be an advantage.

We now come to a few plants that are evergreen, such as Cratægus pyracantha, Jasminum officinale or the white Jasmine, Elæagnus, Escallonia macrantha, Ceanothus of sorts, and the many different and very pretty sorts of Ivy, as well as Cotoneasters Simondsii and microphylla, and the Banksian Roses, and several other plants of similar habits, where the system of pruning should be to extend if necessary and thin out, always bearing in mind that a proper qualification is to have them neat and evenly grown over the whole tree. With regard to Ivy, more especially the coarse-leaved green sorts that have established themselves, a very proper plan is to let them alone till the beginning of April, and then clip the whole of the leaves and shoots off close to the wall with a pair of shears. The plants, no doubt, will look bare for a week or two till they break into growth again; after that, the benefit of this close cropping will be seen, as it will result in producing a very neat closely-grown plant of no mean ornament. Most of the variegated kinds are too delicate in growth, and it will be some time, if ever it does come, for them to be subjected to this manner of treatment. No matter what plant is grown against a house, it should be neatly trimmed, instead of being allowed to ramble at will, of course having due regard to its habits of growth; and as to the time of pruning, I prefer and feel safe if it is done on the first opportunity after the new year comes in, but no pruning whatever should be done in hard frosty weather.

I may also say that whatever planting remains unfinished, get it done as soon as the soil is fit to work upon. It often happens that matters of planting come to a push in the spring, especially in the suburbs of a town, where it arises through the unfinished state of the many residences yearly built in such neighbourhoods, but every preparation should be made, so that the work may done as well and expeditiously as possible. At such times when there is always a certain risk to run through its being late in the season, the work had better be passed off till autumn than to do it in anything but a proper manner. Late planting might be more practised than it is if there was a security that the plants would receive the treatment they require, particularly in the matter of watering, which I hold to be the principal recovering agent if applied frequently and plentifully; but where there is not the means or convenience for this being attended to, and the other wants of the plants looked after, it would be much better and a saving of time and money, as well as after-satisfaction to those concerned, if the planting on such places as I have stated were put off till a more seasonable time.—THOMAS RECORD.

ARCHERFIELD.—No. 1.

THE SEAT OF THE RIGHT HON. R. A NISBET HAMILTON.

MY northern visit was a flying one. After rattling away in the wee small hours of the morning I found myself over the border at Berwick-on-Tweed at 5 A.M. on a smart, chill, September dawn. Dirty, drowsy, shivering, and perhaps just a trifle testy, I was not in the best condition to appreciate the beauties of the land of poetry and chivalry. Beauties have I said? Drop down as I did, and ask for a waiting room, and be told in what was to me grim wit, "No waiting room open, but plenty of room for waiting," with a gentle reminder, which was hardly necessary, of "Hech, man, ye're no i' England the noo," and appreciate beauty if you can. Yet under the corduroy was a kindly feeling, and I was given the post of honour on a greasy bench, by a cosy fire, in a grimy but warm porters' cabin. In an hour was a train for Drem, the junction for Dirleton two miles from Drem, and from Dirleton station it is about two miles by road to Archerfield. A coast run of two to three hours, with a bright sun and brisk sea breeze, with walls of rugged rocks, hills, and fertile vales alternating, worked a steady improvement, and I began to think there might be something worth seeing in Scotland after all. In the distance, leaving Dirleton station, was a towering pile surmounted by a fluttering flag; and in answer to a passer-by, "Is that Archerfield?" was favoured with, "Archerfield, man! That's Dirleton Castle. Ye mun gang awa across the green, and ye'll ken the gate where braw folk enter, an that'll tak ye to Archerfield." And sure enough it did.

At the gate of the "braw folk" is a neat lodge with a garden of shrubs and cheery with flowers, the first little foretaste of the treat to follow. Through an undulated park the broad drive sweeps, and the cleanliness and perfect order of this approach shadows forth the high keeping of the entire homesurroundings. The situation is both charming and salubrious. On the left is rising ground lightly wooded, through which the distant hills peep and where the village nestles. On the right is a steady, clean, and almost unbroken yet partially wooded slope to the sea, distant about two miles, which is the boundary to Mr. Hamilton's demesne, and where he has a marine villa. Straight ahead is a more heavily timbered site, and within the skirts of these fine old trees is the spacious mansion of Archerfield. The edifice is plain and substantial, and savours of what it is—the quiet comfortable home of a Scottish laird with a predilection for rural pursuits and unobtrusive retirement, rather than an ornate structure of a newly-made millionaire, who would attract by the magnet points of architecture of a highly embellished exterior.

As there is nothing further to note here we will go to the garden. This is distant from the house about half a mile through a straight avenue of fine trees. But there are two distinct gardens a mile apart, and each a long stretch from, and quite out of view of, the residence. It may be here mentioned that a characteristic of many places in Scotland is the separation of the garden from the mansion, and it is quite common to find gardening of the very first order, yet unassociated with mere scenic effect, and as a consequence the pencil of the artist, which is in some places so potent, can be of no real use to the pen of the litterateur in his duties of description. Of this type is Archerfield. There is no such thing as getting an attractive and ornamental view of grounds and residence, and no chance indeed of doing justice to the best separated examples of gardening by a colourless impression. Yet gardening is good, and has been good for a long time. In flower gardening Archerfield is almost a household word. It is the scene of the best accomplishments of that accomplished

master of the art, Mr. D. Thomson. It is perhaps the main practice ground from which was evolved the matter of that excellent book of modest title—a work which all should read—the "Handy Book of the Flower Garden." Gardening here was assuredly good then, and it is assuredly good now. The mantle of Mr. Thomson has evidently fallen on an able successor in Mr. Kettles, the present superintendent. Let us look at his work. We are in the Archerfield, or kitchen and glass garden, in contradistinction to the Dirlston enclosure. But even the kitchen garden at this place would make many a flower garden blush for its fame and envious of the effect created by its borders. On entering this walled garden in the centre of the south walk one must perforce stand still. With the telling ribbon borders in the direct line of vision, and a sea of flowers to the right hand and to the left, and a fine range of glass behind, the strange visitor if alone is compelled to halt between two or three opinions: he is, as it were, spell-bound by an overpowering sense of flowers, and knows not which way to turn for the best. It is not so much the arrangement or mere quantity that is so striking as the surprise in entering what is expected to be (and in fact is) a garden of vegetables, and see nothing but flowers. Yet the area of colour and its order of disposition is not to be passed by without a note of examination. The extent of the ribbon borders is about 120 yards, and are in their finish perfect. Their tone is quiet, chaste, and pleasing rather than brilliant and gorgeous. Beginning at the margin of the walk, the lines are planted as follows:—1, Cerastium; 2, Dwarf Ageratum; 3, Dactylis; 4, Iresine Lindeni; 5, Silver-foliaged Pelargonium; 6, Purple Lothian Stocks; 7, Scarlet Gladioli, bounded by closely pinched and planted pyramid Pears, and beyond these rows of Sweet Peas and Scarlet Runners as a divisional fence between the flower borders and general vegetable ground. I am sure Mr. Luckhurst, who so worthily advocates quiet and repose in floral arrangement, would have appreciated these borders, as that is their prevailing tone, with just sufficient streaks of colour to prevent him being hushed to a point just beyond repose—sweet sleep. But no fear of that, or here is an awakening.

Running parallel with the south walk is a close and rather tall fence of espalier Pears. Between these and the walk is a border, with a rather sharp slope, about 6 yards wide and 150 yards long. This border is in three divisions; it is a mass of colour, planted as follows:—Take an end division; the back row next to the hedge of Pears is Tritoma, next maroon and white dwarf Dahlias, then a strong silver Pelargonium. Fronting these rows is a mass, 5 feet wide, of Waltham Seedling Pelargonium, dotted down the centre at intervals of 5 yards with large plants of Centaurea ragusina. In front of this mass again is a line of Dactylis, another of dwarf Ageratum, finishing next the walk with a row of Lobelia and Polemonium in alternation. That is a fine and telling border, the 150 feet by 5 of Waltham Seedling showing to great advantage. For a mass like this it is a question if a better Pelargonium could be found, its free, bold, upstanding trusses and good colour marking it as still one of the best for large masses.

The other end division of the border is similarly planted, except as to the Pelargonium, where Excellent is substituted for Waltham Seedling, and with a less telling effect. The central division of the border is differently planted. It is more quiet, and certainly more beautiful than the ends. In front of the Dahlias at the back is a fine row of yellow Calceolaria, the row next following being of Dell's Crimson Beet. Now comes the 5-feet mass, which is a mixture of Beaton's Silver Nosegay Pelargonium and Purple King Verbena, both in perfect trim as to growth and bloom; the flatness of the mass being relieved by graceful specimens of Yucca oleifolia variegata plunged at wide intervals along the centre. In the front of this fine mixture is a row of Iresine Lindeni, followed by Christine Pelargonium, Cineraria maritima, broad row of Crimson King Verbena, with a margin of Cerastium.

This centre border is, if I recollect rightly, wider than the ends, but taking the whole expanse of bloom from end to end of the three divisions the just balance of high colours with neutral tints, the lines relieved by masses, and the flatness broken by the distinct Yuccas, and the picture disarms criticism by its powerful appeal to one's whole capacity of admiration. There is nothing complex, intricate, or dainty about it. It is just grand in its light yet massive, simplicity—in a word, it is worthy of Archerfield, and with this remark I leave it. On the opposite side of the walk are the Vine and Peach borders, but they are narrow—only 3 or 4 feet wide. These are also planted with flowers, principally with Tricolor and Bicolor Pelargoniums in variety, relieved by fine plunged standard plants of Solanums laden with fruit, eventually to be attractive objects for winter indoor decoration. Such is the south and principal walk of the kitchen garden of Archerfield. It surely savours little of culinary produce. For this we must go behind the scenes—the espaliers and bush fruit trees which line the walks. Here we find just as much attention given as to floral matters. A few varieties of vegetables, and of these the best-suited to particular wants, appears to be the guiding principle in cropping. Not a weed is to be seen, or hardly a decayed leaf visible. Every bit of ground is cropped, and every crop well tended, the whole doing credit to the departmental overseer.

The soil is a good sound loam, rich and deep, of a fine staple for fruit and vegetables, except the upper portion, which is rather light, and, as a consequence, the Pears on the east wall lack stamina. The walls are mostly covered with Pears and Plums carrying fair crops. On the north aspect are Morello Cherries, with Currants and Gooseberries trained vertically from horizontal mains, and in this cool aspect the season of these fruits is usefully prolonged, and is easy to protect from birds. Outside the square is a spacious and useful skirting for fruit and coarse vegetables. Within this skirt on the south aspect of the wall are fine Plum and Pear trees, which bear produce of the first quality. Peaches are grown under glass. The kitchen-garden ground may be about four acres. Apples not a full crop, but whenever we came to a tree of the useful Blenheim Orange it was laden with fine fruit.

We now look at the glass department, which is rather extensive, comprising eleven spacious houses and a considerable extent of pits and frames. The principal range is in the walled kitchen garden, and comprises a central staged house for flowering plants, with four houses on either hand planted with Peaches and Vines. The plant house, as a conservatory, is hardly worthy of Archerfield; the stages, by their elevation, do not show the plants to advantage, which were good. The lean-to's are capital houses, and carry capital crops of fruit. The end ones for late Grapes have a steep pitch, and are well adapted for keeping purposes. Early Grapes and Peaches were gathered, but the late vineries were carrying excellent fruit. Muscats were very good, but the Barbarossa, which is largely grown, was the most striking by its numerous and massive bunches. This variety, which is in many places shy, is free enough here, Mr. Kettles having no difficulty in getting a houseful of bunches. His plan is the very sensible one of training-up young rods, and shortening them at pruning time according to judgment, insuring thereby a choice of spurs and young wood, and what is better, insuring also a crop, guarding against overcrowding. This is a safe plan of getting Grapes, and the Vines are furthermore in a constant and steady state of renewal. Lady Downe's is also fine in the berry, but, of course, not so big as Gros Colman. This latter Grape is not well coloured, one Vine especially being curious in always producing colourless fruit, yet the berries are of large size, and equal in flavour to the black ones on the next Vine. This range of houses is heated by one pipe running along the front. It is flat, 1 foot wide by 4 inches deep, and troughed its whole length three-quarters of an inch deep, which, Mr. Kettles says, gives off too much moisture, and he uses portable evaporators of less superficial area. The front wall is on arches, and the best roots are probably in the inside borders, the outside ones being only 3 to 4 feet wide, and cropped with flowers, although the soil under the walk is made good; but for the matter of that all the soil is good in the garden, and would of itself grow Grapes well with the otherwise good culture here given. There is also another fruit house in the south wall of the outskirt garden about 150 feet long. This is a very light and excellent structure. It is principally planted with Plums, and wired about 4 feet up the roof, so that the back wall has light over this Plum trellis to the very bottom. Besides, from the trellis a branch is carried from the Plums up each rafter Vine fashion. The rafters are 6 feet apart. The back wall is covered with Peaches, having splendid fruit. There are also in this house Figs, Guavas, &c. This useful house is heated, and gives an immense quantity of fruit. It was, moreover, particularly gay, the floor being covered from end to end with healthy and well-bloomed plants of Mr. Pearson's and other good Pelargoniums, than which, in their now varied colours, nothing can give a finer summer display, and what is of first-rate moment, they carry no filth into a fruit house.

In what may be called the forcing ground is another block

of glass. Here Pines are grown in considerable quantity, the plants being remarkable for their dwarf stocky habit of growth. They are grown on what may be called the coal-saving-and-fruit-getting system, Mr. Kettles being no advocate for an extreme high temperature in culture, and of this prefers as much as possible from fermenting material to the caloric of the coal pit. His suckers are raised on dung beds without any linings, removed, of course, in late autumn to the houses. Under this cool treatment fine fruit is produced from plants much dwarfer than is often seen in Pine-growing. All the Pines are grown in pots.

It is not necessary to enumerate the contents of the plant houses; suffice it to say their occupants are in the first order of health. Large specimens are not attempted, hardy stuff for decorative purposes being the point aimed at. Relays of plants for successive seasons are grown in cool pits, and in these plunged in a gentle fermenting material. Such stove plants as Gesneras and Poinsettias were flourishing to perfection, although the bottom heat had long since departed.

The use of one very old hardy plant may be noted—Sedum Fabaria. It is grown in pots for balcony decoration, and serves its purpose admirably. No sort of weather seems to affect it; and as grown here, with heads as large as Hydrangeas, it is ornamental indeed. To see the plant as one generally sees it in undisturbed clumps in the herbaceous border, or settled for life and seemingly immoveable on the rockery, with its little tufts of rosy bloom, one could hardly credit what it is capable of doing under high generous cultivation in or out of pots. It is a hardy, everybody's plant. Let those who have it grow it better, and those who have it not get it and

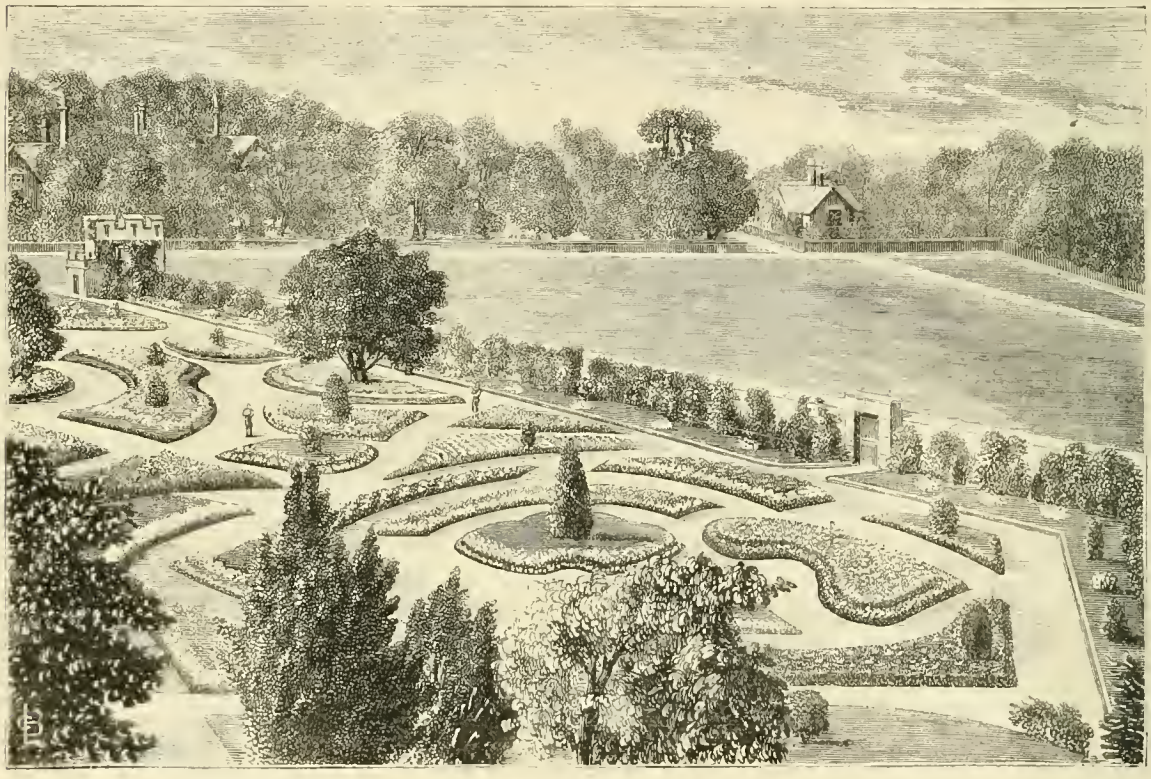


Fig. 2.—Dirleton gardens.

grow it well. But there is the Dirleton garden yet to be looked at—that is, the flower garden proper. It must be deferred. Archerfield is a fine place without it, but with it its interest and beauty is immensely enhanced.—J. Wright.

THE AVIARY.

We have much pleasure in this, the first number of another volume, in presenting our subscribers with an engraving of an elegantly-designed aviary, accompanied with a few remarks as to the necessary fittings.

In furnishing and carrying out the interior the aid of a clever wireworker and other skilful artificers will be required. The following remarks will, no doubt, be acceptable to those desiring to fully enjoy the pleasures of an aviary.

"An Eye-witness" says—I will first remark upon the perches, which should not be arranged or fixed immediately over each other, neither should they run in a transverse direction. One advantage will be not to have the perches long or continuous; for by having numerous small perches and others of various lengths here and there jutting out from the sides of the aviary, the birds will be more advantageously distributed over the same. Sets of perches can be made so as to be fixed in almost any part of the aviary, constructed as to open out in a similar manner as a pair of steps; or three long strips of wood secured with a piece of wire at the top can be opened out in a triangular form, and circular perches or hoops of various size (three or four) can be slipped over the triangular framework and the whole so extended as to prevent the birds upon the upper perches soiling those upon the perches beneath. Some aviary-keepers adopt the plan of procuring suitable branches of trees, the butt ends of which they either have fixed in large garden pots or small firkins filled with mould. If firkins are used they can be dressed up with cork or bark to make them more ornamental.

For aviaries seed-hoppers are preferable, for the birds cannot waste or soil the seed as when it is supplied in open troughs. The hoppers can be placed in various parts of the aviary. They are better when constructed with sliding glass fronts than entirely of wood, for it may be better ascertained when the hoppers require replenishing with seed. Potteryware is better than either wood, tin, or zinc to give soft-billed birds their food in, for they can be the more readily cleaned. The birds kept mainly upon soft food would be better kept apart from those living almost entirely upon seeds. In an aviary this could easily be effected by a wired partition.

The floor of the aviary should always be abundantly supplied with coarse grit sand or very fine gravel (red looks best, and plenty of it can be obtained from the London bird-dealers); and sand retreats or recluses are particularly acceptable to the Tit tribes, the cork bark here again being used, besides small branches fixed up in the corners for the birds to occasionally retire to or roost in.

Aviaries can be thoroughly ventilated by the aid of perforated zinc fixed at the topmost part of the structure, without any fear of draughts of cold air. The windows should all be protected with wirework.

A very essential matter in an aviary is a good supply of water daily and the free use of the bath. Where some of the birds are partitioned-off from the others they cannot equally enjoy the free use of the bath, therefore they must now and then be supplied with a bath on a smaller scale than the one I refer to below. I will give an instance how the water supply was managed in an extensive aviary.

A detached aviary house (which was well sheltered from the north by a copse of trees), not so spacious or elegant in design as the illustration given, had an entrance-door in the centre, with the aviaries situated right and left. Inside, about a yard from the outer door, were also a pair of folding doors, through which I had to pass before fully enjoying a good view of the aviaries. One side was appropriated to the larger kinds of birds, and the other to the smaller Finch tribes, Canaries and Mules. Upon the floor, in the centre of each, a small grotto or rocky pile was constructed, and through the centre of each ran a very thin tube as a fountain. Surrounding this tube, about 4 inches from the top, ran a piece of zinc spouted around, off of which the water ran on to the rock or grotto below, the water being

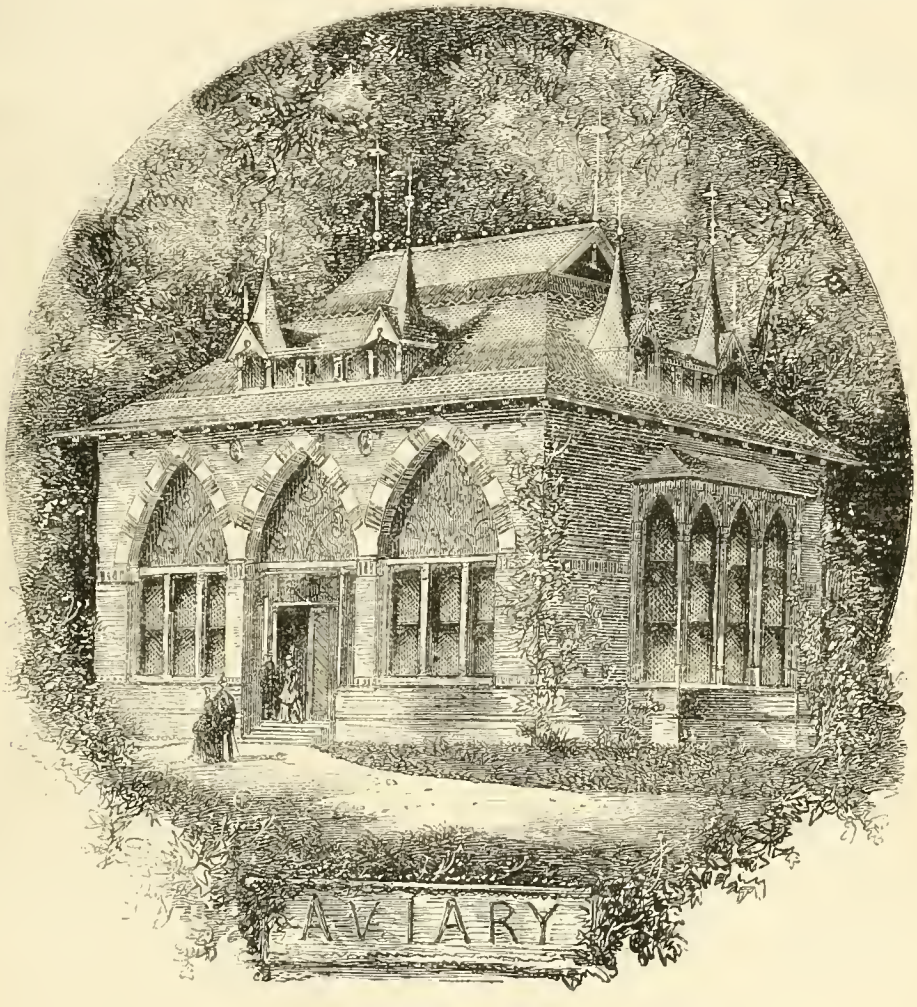


Fig. 3.

received in a bath surrounding the grotto. The baths (the sides of which were about 6 inches high) contained about 3 inches of water, never more, the bed being formed of loose shingle, and small sea shells and rock. The fountains were each supplied through pipes inserted into the bottom of a deep cistern fixed at the back part of the building, into which the rain water from the roof was conveyed. At other times the cistern was supplied by hand. Not having the advantage of waterworks in the vicinity, the fountains in very dry weather did not play so well. In the pipes leading from the cistern taps were fixed to turn on the water, which when more than 3 inches deep in the baths was conveyed through other pipes into a well or covered cistern outside, and afterwards made available for the flower borders surrounding the aviary. There was another provision made, that when the outer cistern filled beyond a certain mark the water ran off into a drain.

Inside the building, skirting each side of the aviary, were fixed rustic-looking chairs or seats, and numerous pots of choice greenhouse and other plants were arranged. The whole had a pleasing effect, and was interesting. Similar plans could be carried out in the aviary of which we furnish an illustration taken from the American "Fanciers' Journal."

DOINGS OF THE LAST AND PRESENT WEEKS.

The lowest temperature at Loxford was 16° Fahr.; on the same night the mercury at Bury St. Edmunds dropped to 4°, or 28° of frost. Bedding Calceolarias require a thick covering of straw over the usual protection afforded by mats. When the frost was severe, even in the daytime the covering was not removed at all, but on Saturday morning about half an inch of rain fell, and the temperature got higher until daybreak, when it again fell to the freezing point, leaving the roads and paths sheets of ice. At midday the glass rose to 41°, and all coverings were removed and the plants overhauled, everything being in as good condition as they were before the frost. In the Auricula frame were a number of decaying leaves on all the plants, but more so on the Alpines. These were picked off, and not a plant injured in the least. The Carnation frame did not require any attention, ex-

cept to draw the lights off for a few hours; this was done to all the frames, to the great benefit of the plants.

FORCING HOUSES.

Pineries.—In the fruiting house are a few plants swelling their fruit; and if the house was full of such, it would be desirable to maintain a minimum temperature of 65°, rising to 70° or 75° by day; and all fruiting pineries ought to be sufficiently supplied with hot-water pipes, so that this temperature may be kept up even in severe frosty weather if necessary. A house 15 feet wide, and sufficiently high for fruiting Pines, and of the constitution of what is called half or three-quarter-span, should not have less than six rows of 4-inch pipe. The best succession houses are half-span, and may be from 10 to 12 feet wide with four rows of 4-inch pipe. But to return to the fruiting pinery. Our temperature in very cold nights is sometimes as low as 55°, but 60° is the most usual. We have had fruit swelling and others in the flowering stage about the new year in previous seasons; and although the temperature was but little increased until March, the Pines swelled and ripened-off well, and not unfrequently gained first prizes at the early summer shows in London. We merely mention this, as many growers think a much higher temperature absolutely necessary. On the other hand, we have found out that a great mistake may be made if the minimum is 5° lower through the winter months. We had charge of a house of early fruiters many years ago, and owing to the house destined for them being required for early Vines, the Pines were placed in a house and plunged in a good bottom heat, but through insufficient piping the night temperature could not be kept up to 55°, but fell to 50°, and sometimes even lower. During this time the fruit began to throw up, and though the plants were all that could be desired, the fruit when ripened-off were miserably poor and badly shaped. Succession houses are also kept quiet as yet, very little moisture in the atmosphere and no water at the roots. In none of the houses is moisture supplied from the evaporating troughs over the hot-water pipes.

VINERIES.

The Lady Downe's in the late house have shrivelled rather more than usual this year. Where it is necessary to keep up a high degree of warmth in the hot-water pipes to keep out the frost for many weeks together, it is to be expected that some berries will shrink a little; but they had done so previous to much firing, and in our peregrinations round the country we have seen other people's very much worse than our own. No doubt the ripening of the fruit in August has a good deal to do with it. In Essex Lady Downe's will ripen without artificial heat after the fruit is set and thinned, but it is better with, and probably if we had been more lavish with fuel in August the fruit would have been much firmer and have kept better. Gros Guillaume has kept well, and not a single berry was shrunk when the bunches were cut with the branch attached for bottling. Muscat of Alexandria had not kept quite so well, but only a very few berries had shrunk, and a few mouldy ones had been cut out. The only other white Grape kept up to this time is Royal Vineyard, but it does not keep any better than the Muscats —indeed, they did not keep so well this year. Mrs. Pince also kept badly; it cannot at all be compared to Lady Downe's for keeping, nor with Gros Guillaume. The great desideratum is still a Grape that will keep with Lady Downe's, black and white, with a flavour equal to Mrs. Pince. In the room where the Grapes have been suspended the frost is just kept out by a small stove; all fruit decays quickly after having been frozen. Pruned the Vines immediately that the fruit was cut, and had the woodwork of the house washed, the Vines washed with soapy water and dressed with the mixture that had been used in the early houses.

CUCUMBER HOUSE.

The plants which were put out in October for winter-fruiting failed to a large extent; why, we have not yet discovered. Seeds sown about the second week in December vegetated freely, and the plants are now making vigorous growth. They are close to the glass, the pots being placed on a shelf rather than having them plunged in bottom heat, where a quicker growth would result from it, but not a healthy one. The greatest care is necessary to see that no insect pests attack the plants; thrips and green fly do the most mischief. We would rather that the night temperature in this house does not fall below 65° at night. Where the trellis is covered with the growing vines of the Cucumbers it will be necessary to look over the plants once in a week or ten days, and remove all superfluous growths and leaves that show some signs of decay, nor ought the leaves to be too thickly crowded together.

Strawberries.—The earliest batch of Black Prince have been removed from a house where the temperature was 50° to one of from 5° to 10° higher. The flower trusses were not showing, but the new leaves were pushing out of the centre of the plants. The next lot, composed partly of Black Prince and Keens' Seedling, were taken from a cold frame to fill the place of those that were removed higher up. Alternate watering with weak manure water is of much service to the plants, and should be applied as soon as the centre leaves show themselves. If any of the pots are not far removed from hot-water pipes the mould may become dry between the times of watering, and should such be neglected for a day the plants may suffer, when red spider will be sure to attack them.

Orange trees that had been at rest in a cool house have been removed into heat. They were starting into growth before removal, and in one instance the flower-buds were visible. St. Michael's and Maltese Blood varieties ought to have the flowers expanded early in February; even then the fruit will not ripen much before Christmas. Tangierine will ripen fully a month before the above varieties.

Figs in pots have been started in an early vinery with the Vines. We have always been most successful with Figs in pots when a little bottom heat could be applied to them, either by plunging in some fermenting material or by placing the pots over hot-water pipes; either way the plants should not be far removed from the glass, and fully exposed to the light.

PLANT STOVE.

Thanks to the aristocratic Orchid family, there need be no lack of flowers during the whole of the winter months, and most of them are comparatively of easy culture. Lælia anceps and varieties of it are the showiest and best of that genus in flower now. Phalænopsis grandiflora, the Moth Orchid, is most useful at this season; but those who are fortunate enough to possess a dozen plants of it may have it in flower nearly all the year. Eucharis amazonica, this snow-white beauty, is now a mass of flower; and as soon as one set of flowers are over, in a month or so another set is thrown-up, so that with three good-sized plants we are seldom without flowers of it. All the treatment that it requires is good turfy loam with a little leaf mould for the plant to grow in; it also requires plenty of pot-room, liberal supplies of water at the roots, and a temperature of from 60° to 65°.

We have been enabled to do nothing in the stove department, except to clean and train plants. Thrips next to mealy bug is the most difficult pest to deal with. Fumigating, if persistently followed-up, will destroy them, but then tender plants are often injured also. Washing them off with a sponge and soapy water is the safest, and now that little other work can be done this should be seen to.—J. Douglas.

TRADE CATALOGUES RECEIVED.

B. S. Williams, Victoria Nurseries, Upper Holloway, London.—*Descriptive Catalogue of Seeds, &c.*

Carter & Co., High Holborn, London.—*Carter's Vade-Mecum.*

Royal Exotic Nursery, King's Road, Chelsea.—*Veitch's Catalogue of Garden and Flower Seeds.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Books (*A. B., Knowle*).—Our "Garden Manual," which you can have for twenty postage stamps by post from our office. W. Paul's shilling "Book About Roses." Kent & Co., Paternoster Row.

White Grape for South Wall (*Wantage*).—The Royal Muscadine.

Royal Horticultural Society's Provincial Meeting (*Resurgam*).—The place and time for 1875 is not yet decided.

Twelve Select Hyacinths (*H. W. S. C.*).—The list we published in our No. 717 was furnished by a grower from a foreign list, and they are not obtainable in England. We have applied to Messrs. Cutbush, florists, Highgate, so well known as Hyacinth exhibitors, and they have obliged us with the following:—"The following are easily procurable, which will please any cultivator—Macaulay, deep rose, striped crimson; Florence Nightingale or Fabiola, very pale pink, with light carmine stripes; Von Schiller, deep salmon pink; Robert Steiger, bright crimson; Gigantea, deep blush; Queen of the Netherlands, pure white; Mont Blanc, pure white; Grandeur à Merveille, pale blush; Baron Von Tuyll, deep blue; Charles Dickens, greyish blue; Grand Lilas, azure blue; Prince Albert, purplish black. We could, of course, add plenty of other first-class varieties, but do not think there are many better than the above."

Utilising Space in Unheated Vinery (*J. C.*).—It is folly to seek any great advantage from a growing of many things in a house that is only suitable for few. Cucumbers, also Melons, would do fairly, but Tomatoes better than either. Small saladieg might give you some return; and Sea-kale, Rhubarb, and Asparagus gently forced, commencing, say, the beginning of February, would answer, the vapour of the fermenting materials not injuring the Vines in a dormant state. The fermenting materials if placed upon the Vine border must be removed ere the Vine have rooted much into them; better if it be done before.

Surrounding Pipes for Bottom Heat to Cucumbers (*Beginner*).—The soil ought not to be placed upon the pipes, but be surrounded by rubble, brickbats, or clinkers, and brought over the pipes about 6 inches, and over these a layer of sods or the rough parts of the compost, and upon this the soil. The soil should be broken up rather fine, but not sifted. Mille's treatise on Cucumber culture is probably the best, but we think it is out of print. Cuthill's is also good.

Heading Maiden Apple Trees (*J. H.*).—Being planted the past autumn they will be best headed-back in February, or so soon afterwards as the weather is mild, but doing it at the first mild weather after the middle of the month.

Erecting a Vinery (*H. B.*).—Arrange by all means to have the Vines planted inside, 18 inches to 18 inches from the front wall. It will be well, if the subsoil is clay or wet, to pave the bottom either with bricks or pebbles, and run the joints with cement. This base should have an incline to a drain, or rather to a certain part where should be a drain, and laid upon the cemented floor, and this drain must have proper fall and outlet. You will need a drain for the outside as well as inside border, and lengthwise of the border, having the inside one about 3 feet from the front wall, and the other about 4 feet from the outside of the border. The front wall ought to be arched, having 14-inch pillars, with 2-feet to 2-feet-3-inch openings between each. The top of the arches should be flattish, so as to raise the top and allow the roots to have freer access, nearer the surface, to the outside border than were the arches semicircles.

Raspberries Unfruitful (*H. L. E.*).—The situation is unquestionably the cause of failure, the shade being unfavourable to the perfection of the growths. If they are a good kind you may safely make a new plantation from them, but choose an open though sheltered situation. Manuring would help, and so would watering, the fruit to swell, but the Lime roots would appropriate a good deal of both.

Peach and Nectarine Trees not Thriving (*Idem*).—Your soil is against the healthful growth of the trees. We should lift the whole of the trees, and manuring liberally and adding some fresh soil—rather strong turfy loam is best, and making the soil of the border very firm. The "wash" will not cure the cancerous development, but is good against insects. The leaves "blister" owing to cold and sudden changes of temperature, which may be obviated or lessened by copings and canvas protection.

Scale on Peach Trees and Myrtles (*G. M.*).—The sprigs of Myrtle and the shoots of Peach trees are infested with brown scale, which causes the leaves and everything under and around the infested plants to be covered with a gummy exudation or secretion called honeydew, and this drying affords a medium for the development of black fungus. If you remove the scale the other appearances will disappear. A solution of soft soap, half a pound to a quart of water, adding to it half a wineglassful of spirits of turpentine, and thoroughly mixing and applying with a brush will destroy it, applying it at a temperature of 120° to 140°, taking care not to allow it to run down to the roots, but to apply it to every part infested with the insects, both sides of the leaves, and all round the shoots.

Painting Flower Pots (*V.*).—It is injurious to paint the outside of flower pots, as it takes away their porosity, shutting the roots out of atmospheric influences. The pots ought to be kept clean washed, free of mossy accumulations.

Trees for Lawn (*C. J. W.*).—The following are fine evergreen trees for a lawn, but we should advise you to employ them at the margins or boundary, leaving the centre comparatively open. Many lawns are spoiled by trees upon them, as if the object were to cover it with trees without any regard to effect:—Abies excelsa alba; Cryptomeria elegans; Cupressus Lawsoniana and vars. gracilis, glauca nana, and stricta; Juniperus chinensis, J. virginiana; Picea grandis, P. nobilis, P. Nordmanniana, P. pinsapo; Pinus excelsa, P. cembra; Retinospora pisifera, Taxus adpressa stricta, T. pyramidalis, T. elegantissima, T. fastigiata; Thujopsis borealis; Thuja Lobbi, T. orientalis, and vars. aurea and elegantissima; Cedrus Deodara, C. atlantica, and Araucaria imbricata, with Wellingtonia gigantea, which you name. Those are all evergreen and Coniferæ. Have a few Gold and Silver-variegated Hollies, and a Portugal Laurel or two, and some Rhododendrons as specimens. We should also have a few weeping trees, as Betula laciniata pendula, Fagus pendula, Fraxinus excelsior pendula, Salix americana pendula, S. capres pendula, and Camperdown Elm. A few flowering standard trees, as Cerasus japonica multiplex, Double Pink, White, and Scarlet Thorn, Cytisus pendulum, Liriodendron Tulipifera, Magnolia conspicua, Pyrus communis Bollwylleriana, and Pyrus præcox.

Everlasting and Ornamental Grasses (*C. K.*).—Acroclinium roseum and var. album, Ammobium alatum, a small white Everlasting; it and the two preceding being half-hardy annuals. Helichrysum bracteatum and var. alba, H. monstrosum album flore-pleno, and the following double varieties of, H. monstrosum flore-pleno—atro-coccineum, luteum, purpureum, and roseum; Rhodanthe maculata, its white variety (alba), and atrosanguinea, R. Manglesi. The Rhodanthes are half-hardy annuals. For quantity, the best plan is to procure a "collection of double Helichrysums in ten varieties," they being the best, adding the Acroclinium, Ammobium, and Rhodanthe if you wish, but they are not nearly so profitable. Grasses are—Agrostis nebulosa, A. argentea; Briza gracilis, B. maxima; Eragrostis elegans, Lasiagrostis argentea, Paspalum elegans, Piptatherum Thomasi, and Stipa elegantissima.

Pæonia Moutan Failing (*H. B. H.*).—The tree Pæonies require no particular treatment, but require a rather light and moderately rich soil, enriching it with leaf soil, vegetable refuse, or well-rotted manure, and planting high rather than low, and about the same depth as before, dishing around the plant for watering, which should be done in dry weather copiously, for want of which we think your plants have died. They require a sunny sheltered situation. The plants, if they show for flower the year of planting, ought not to be allowed to do so, but take away the bud when it is clear of the leaves.

Conservatory Construction (*A Constant Reader*).—The size of the squares will depend upon the description and thickness of glass. If you use ordinary 21-oz. sheet glass, the squares should not be more than 12 to 15 inches in width, and about three times the length of the width. When 26-oz. or 32-oz. glass is used the squares may be 15 to 18 inches in width, and 3 to 4 feet in length. We have these sizes, and with an eighth to three-eixteenths of an inch lap, there has not been any breakage of glass from frost in four years. We should have in each house a slate tank of 6 feet length, and 3 feet width and depth, which will give you about three hundred gallons of water, and will be sufficiently large for a house of the dimensions you name. Have it raised so that you can water your plants with a hose-pipe. It is desirable to have rain water, which is the best of all for the plants, and in the tank it would be heated to the same temperature as that in which the plants are growing.

Roller for Blind (*F. T., Dublin*).—The diameter of the roller should be 3 inches, and the wheel twice the diameter of the pole or roller, and have an indent of about 6 inches width and 2 or 3 inches deep to receive the cord. The roller only rests upon the rafters, and the wheels are clear, running alongside of the outside, and by having a wheel at the other end it will move up and down straight, about half an inch of play being left at each end. The shading must, of course, be pressed each time the roller is run up or down, but it does not injure the material any more than a mangle does linen.

Elliot Copings (*J. E.*).—We have a letter for you, but have mislaid your address.

Arbor-Vitæ Planting (*A. B.*).—Four feet apart is not too close for the purpose you have in view, but the roots will extend into the Asparagus bed and injure the plants.

Garden Labels.—Mr. J. Smith, Royal Label Factory, Stratford-on-Avon, writes to us to say that it might be inferred from what has appeared in our columns that he has discontinued making "imperishable metallic labels." That this is not the case, we may refer to Mr. Smith's advertisement now in our columns.

Names of Fruits (*H. W.*).—The Pear is Thompson's, and the Apple Royal Somerset. (*D. M. P.*).—*Apples*—1, Braddick's Nonpareil; 2, Old Nonpareil. *Pears*—1, Gilogil; 2, Not known. (*James Ducker & Son*).—Devonshire Buckland.

POULTRY, BEE, AND PIGEON CHRONICLE.

MILLOM (CUMBERLAND) SHOW of POULTRY, &c.

(*From our own Correspondent.*)

For several years, owing to the closing of the Ulverston Poultry Show, the extensive district of Lonsdale North of the Sands, Lancashire, containing as it does many keen breeders of poultry, was unrepresented. To remedy this, three years ago a committee of gentlemen in the adjacent county of Cumberland, connected with the Millom and Broughton Agricultural Society, conceived the idea of holding a Show of poultry on New Year's Day. Seeing that the Society has a wide radius, there being no exhibition within a circle of some thirty miles, no astonishment will be felt when we say that at the Show this year there were no less than 272 entries. The Exhibition was held in the new Town Hall, Millom, and was numerously attended. The various classes were all well represented, nine silver cups, a silver cream jug, and a silver cruet stand, in addition to the money prizes, being offered for competition.

"Cannie Cumberland" has an eye, it will be deduced from the above, to the substantial as well as the beautiful. Before the laws made it actionable for cock-fighting, few districts were more noted for the breed of *Game* birds than was this, and the pursuit has not been relinquished, a splendid class facing the Judge on Friday. Mr. Teebay, one of the most experienced of judges, said it was a long time since he had handled a better bird than the one he awarded first cup honours to in Class 2, belonging to Mr. John Wilson, of St. Bees, an exhibitor known favourably at all the principal shows in the kingdom. The *Game Bantams* were also a large class and much admired. *Brahmas, Cochins,* and *Dorkings* showed to advantage, and as table birds almost put Turkeys to the blush, some of the birds being of great size and extraordinary weight, whilst their eggs shown on a table in the centre of the Hall, gave the lie direct to Mrs. Partington's recently uttered libel on eggs generally. *Ducks* were also a capital class, and the prize pens belonging to Mr. J. W. Brockbank, The Croft, Kirksanton, an exhibitor of wide note, led the uninitiated to ask whether they were not looking at Geese, so large were they in their proportions.

The *Pigeon* Show this year was a new feature, yet many very nice birds were shown.

Game.—*Any variety.*—*Cock.*—1, P. & W. Sumpton, Bother, Aspatria (Brown Red). 2, J. Tremble, Aspatria. 3, S. Riley, Sunbreak. *hc*, W. Boulton, Park house (Brown Red). *Black-breasted and other Reds.*—Cup, J. Wilson, St. Bees. 2, E. Swainson, High Nibthwaite. 3, R. B. Hudson, Dalton-in-Furness. *hc*, S. Riley; W. Grice, Bootle. *Any other variety.*—1, W. Higgin, Ulverston (Duckwing). 2, J. Muckereth, Cumberland (Duckwing). 3, J. W. Brockbank, Kirksanton.

Brahmas.—Cup, C. J. Myers, Broughton-in-Furness. 2 and 3, J. W. Brockbank. *hc*, T. Bellman, Backbarrow (2); W. Birkett, Bootle. *c*, T. M. Swainson; G. Sanders, Bootle, Carnforth.

Cochins.—*Buff and Partridge.*—1, J. O. Rigg, Ulverston. 2, C. J. Myers. 3, E. Fearon, Whitehaven. *c*, Mrs. Brockbank, Garthland. *Any other variety.*—1, T. M. Swainson, Millom (White). 2 and 3, J. & T. Weeks, Bootle, Carnforth (White).

Dorkings.—1, E. Fearon. 2, J. Wilson. 3, Miss Knowles, St. Bees.

Spanish.—Cup, J. Wilson. 2, J. W. Brockbank. 3, J. Tremble.

Game Bantams.—*Black-breasted and other Reds.*—Cup and 2, W. Grice. 3, H. A. Clark, Aspatria. *hc*, H. A. Clark; J. Burrow, Low Wood. *Any other variety.*—1, 3, and *hc*, J. W. Brockbank (Duckwings). 2, T. Bellman (Piles). *c*, W. Higgin (Piles).

Hamburghs.—Cup, J. Jackson, Drigg Station. 2, T. Bellman. 3, H. A. Clark.

Any other Variety.—1, C. J. Myers (Houdans). 2, J. Allinson (Houdans). 3, H. A. Clark (Golden Polands) *hc*, R. J. Robinson, Ulverston (Houdans); Miss H. Robinson, Wigton (Houdans).

Ducks.—*Rouen.*—1 and 3, J. W. Brockbank. 2, S. Thornton, Millom. *hc*, R. J. Robinson. *White Aylesbury.*—Cup, 2, and 3, J. W. Brockbank.

Selling Class.—*Cock or Drake.*—Cup, L. Casson, Ulverston (Duckwing Game). 2, J. Taylor, Bootle (Buff Cochin). 3, J. White, Ulverston (White Cochin). *hc*, E. Fearon (Cochin); J. Jackson (Golden-spangled Hamburgh)

C. J. Myers (Houdan); J. Robinson (Brahma); J. Mackereth (Duckwing Game); W. Higgin (Pile); J. & T. Weeks (White Cochin); J. Leech, Ulverston (Pile Game); J. W. Brockbank (Dark Brahma and Drake); W. Grice (Game Bantam); L. Casson (Duckwing Game). *c*, R. J. Robinson (Houdan); J. Robinson (Brahma); R. B. Hudson (Aylesbury).

Selling Class.—*Hens or Ducks.*—1, H. J. Nicholson, Millom. 2, W. Higgin (Game). 3, J. & T. Weeks (White Cochins). *hc*, E. Fearon (2); H. J. Nicholson; J. O. Rigg; W. Grice (Game); W. Bell, Cumberland (Golden-spangled Hamburghs). *c*, E. Fearon; J. Mackereth (Black Red Game).

Local Class.—*Chickens.*—Cup and 2, J. W. Brockbank. 3, T. M. Swainson, *hc*, W. Birkett; J. W. Brockbank.

PIGEONS.

Carriers.—1, J. & W. Towerson. 2, J. Cook.
Pouter.—1 and 2, J. & W. Towerson, Egremont.
Tumblers.—1, J. Cook, Egremont.
Jacobins.—1, J. Cook. 2, J. & W. Towerson. *hc*, Mrs. Brockbank.
Any other Variety.—1 and 3, J. & W. Towerson. 2, C. J. Myers (Magpies). *hc*, J. Cook.

Judge.—Mr. R. Teehay, Fulwood, near Preston.

THE POULTRY-KEEPER.—No. 29.

HAMBURGHS.

Of the Hamburgh are several varieties. The principal are the Silver-spangled and pencilled Hamburgh, and the Golden-spangled and pencilled. This name Spangled alludes to the spots like spangles with which a great part of their plumage is covered, and the Pencilled to irregular lines on the feathers. Besides these there is the Black Hamburgh.

SILVER-SPANGLED HAMBURGHS.—HEN.

General Characteristics.—Plumage white, black-spangled; rose comb; gait extremely lively and graceful; form rounded. A little below middle size.

Head.—Strong, flattened at the top.

Eye.—Very large, of a dark colour and brilliant; iris dark brown, pupil black.

Cheeks.—Red and bare round the eyes, sprinkled with little fine white feathers in the other parts.

Comb.—Rose, with little long regular points, forming an almost flattened surface, oblong, rounded in front, pointed behind, covering the base of the beak, diminishing in size at the side, and finely pointed at the back of the head.

Wattles.—Placed well under the beak, perfectly round and concave.

Ears.—White, like mother of pearl, placed flat on the cheek, very small.

Tufts.—White.

Beak.—White, light blue at the base.

Legs.—Ashy-blue colour.

Laying.—Excellent, eggs very delicate and of middle size. Non-sitters.

Fig. 4.

Fig. 5

Feathers of the head, on the borders of the comb, and on the upper part behind the neck, white. Hackle feathers (fig. 4), white, marked with a deep black spot at the end. The upper feathers of the hackle near the head are very small, increasing in size as they get to the base of the neck. The size of each spot is in proportion to that of each feather, only the spots are longer. The breast feathers (fig. 5), have a great resemblance to those of the hackle, and are marked more regularly and uniformly. The feathers of the loins, the shoulders, the covert of the tail, the thighs, and the legs should be as much as possible like those of the back and breast. The large wing feathers (fig. 6), white, edged by a thin black border wider at the ends. Large wing feathers quite white; large tail feathers (fig. 7), white with

Fig. 6.

Fig. 7.

the exception of the ends, regularly marked with a black band. The feathers of the sides and abdomen are of a dark grey. The white of the plumage is pure, like ivory. The black is iridescent with deep violety green.

HUDDERSFIELD POULTRY SHOW.

The first Show for a great many years was held on the 29th and 30th of December, in the Armoury, or Volunteer Hall. The entries were very large, there being upwards of eight hundred, 120 of which were dogs, and, unfortunately, they occupied the best portion of the hall—viz., the side of the room where the best light was. In respect of light the building was not one of the best places, and this, together with the fact that the weather was very heavy and the pens being in double tier, the bottom ones were rather dismally placed, and yet the most was made of the room at command. These remarks refer to poultry and Rabbits, for the Pigeons being round the gallery were in splendid light and position. On our arrival at about ten o'clock on the morning of the Show all things were in a very backward state, said to have been caused by the pens not being set up, and this caused the judging of the specimens to commence late; and the public being admitted soon after, it was a great impediment to the Judges' progress. The awards were not completed till near four in the afternoon, and yet, though the Committee was quite a new one, all was well carried out, Mr. Hudson of Hull rendering the utmost assistance in the management. The Show was in one sense a double one, as in all sections there were local classes, some of which, notably the Cochins and Rabbits, showed up uncommonly well; the specimens, if not quite equal, being close upon the general classes in quality.

To start with the general classes. *Dorkings* had but two entries, but the *Cochins* were numerous and grand in quality, Mr. Walker's model pen of Buffs securing the section cup; second were two good pens of Partridge, and third White. *Bantams* were numerous and good, the first a grand old pen, and second and third chickens. There were but five pens of Light, but these of fair quality. *Spanish* were moderate, and the winners old birds. In the *Hamburghs*, which were mixed classes as regards colour, only the winners were good; the first in both classes being Gold, and second Silver. *Game* were a capital class—scarcely a pen but that deserved a mention, and the awards were made to first Blacks, and second and third Brown Reds, but the light was so bad here that it was with the greatest difficulty the awards were arrived at. The Variety was a great feature, almost every pen being good, and the winners champions of their order. First-and-cup for the section a faultless pen of Silver Polands, second an equally good pen of La Flèche, and third Black Hamburghs. Pen 230 (Harvey), Gold Polands, contained a marvellous hen. *Game Bantams* were a grand class, first were Piles, second and third Black Reds. *Bantams*, any other, were first Whites, second Blacks, and third Blacks. In the Selling class, Partridge Cochins, Brahmas, and Pile Game won.

Rouen *Ducks* were an even lot except as regards the first, which, however, stood clear of the rest. Aylesburys were but a moderate lot, the second no doubt one of the best pens living, but altogether too dirty and overshown.

Pigeons.—*Pouters* first, the cup going to a grand Blue Pouter cock in the best possible order, the second a hen also Blue, and third a cock. In *Carriers*, a Black cock well known in the fancy stood clear of the rest; second being a Dun quite young and good in all points; third a Black of extraordinary length and style. Of Almond *Tumblers* there were but four pens. Any other colour were a good class, the first a Black Mottle of exquisite quality, colour, and marking; second a Light Red Mottle of good head properties; and third a very sound-coloured Red. *Antwerps* were good, the Bradford cup-winner, a Silver Dun cock, first; second a grand Long-faced Blue Chequer, and third a short-faced Blue Chequer; the whole of these in addition to the head properties having short, clean-cut, Antwerp wings and tails, and not the long, slouching, Barb-like appearance and carriage. Many others were noticed. *Jacobins* a good lot, a Red cock first, and immediately claimed; second Red, and third White. *Trumpeters* only three, but very good. *Turbits* a grand class, the first a Black of rare excellence, second Yellow, and third Blue, all spike-headed. *Fantails* all noticed, which fact speaks much for the quality. *Barbs* contained four of the best birds in the kingdom, shown by Messrs. Firth and Harvey; in fact, it is a treat to see such birds. *Dragoons* a good class, the flat-skulled birds left out: first a capital Blue of the good old stamp; second a grand-skulled bird, but a little too down-faced and somewhat thin at beak-end, and third a young Yellow. In the Variety class, first was a real good English Owl, second a Spangled Ice, third a White Owl, an extra second and third being awarded; but the Selling class contained nothing of note, and in point of quality the local classes did not show the spirit of the poultry section.

There were 153 Rabbits, and they were a grand lot, but the Lops were badly placed as regards light, being on the lower level and under the Silver-Greys and Himalayans. Cold as the weather was they measured well and that without undue pulling. The first went to a Black-and-white full-propertied doe 22¼ by 4¾ inches; second to a very large Fawn doe with immense dewlap, 21¼ by 4¾ inches; and third to a Black-and-white doe 22¼ by 5 inches, but low in condition, many others measuring well; but we are sorry to say there was one doe, a Black-and-white, 23 by 4¾ inches, which would no doubt have won the first, had its eyes badly hurt, by what cause it did not seem to be known. Silver-Greys were a very heavy class, and all were noticed; the first winner, Miss Mortimer's buck, won also the cup for the best Rabbit in the Show, and two extra prizes were awarded, the winners running very close in quality. Only those noticed were good in Himalayan, but the first was a massive doe very good in her points, second a smaller young Rabbit but very good, as also the third. Angoras were also good, Mr. Swetnam coming first and third. Most were noticed. The first in the Variety class was a young Black-and-white Dutch good in all points, second a very large Patagonian, not so good on its pins, and third a Black-and-white Dutch. The first in the Selling class was a real good Silver-Grey.

There was a good show of Cats, and rare interest was manifested, by the ladies especially. In the first a real good Tortoiseshell stood well, the others being Tortoiseshell and White. Persian were but moderate, but Any other variety a grand class. The first in these, a young Grey Tabby, was a beauty; the second a grand Black, also a Tabby.

Dorkings.—1, J. Walker, Rochdale. 2, W. Harvey, Sheffield.
Cochins.—Cup and 1, J. Walker. 2, A. Bamford, Middleton. 3, W. G. Urwin, Whitby. *vhc*, J. White; H. Beldon, Goitstock, Bingley. *hc*, H. Dean, Keighley; W. H. Crewe, Etwell. *c*, D. & J. Ibeston, Whitby; A. Spencer, Liverpool.
Brahmas.—*Dark.*—1, W. Whiteley, Sheffield. 2, J. W. Stansfield, Halifax. 3, Dr. J. Holmes, Whitecoats, Chesterfield. *vhc*, E. Ryder, Hyde. *hc*, Dr. J. Holmes; Bridgewater & Yoxhall, Wednesbury; E. Sharratt, Rugeley. *c*, Dr. J. Holmes; W. Whitaker, Woodley; W. T. Millett, Fairfield; A. Bamford; J. Walker; F. Steele, Halifax.
Brahmas —*Light* —1, H. Beldon. 2, H. Chawner, jun., Houndhill. 3, J. Fox, Huddersfield. *c*, J. Steele, Luk; H. Chawner, jun.
Spanish.—1, H. Beldon. 2, J. Thresh, Bradford. 3, J. F. Walton, Rawtenstall.
Hamburghs.—*Gold or Silver-spangled.*—1, J. H. Booth, Hartholes. 2, H. Beldon. 3, M. H. Broadhead, Holmfirth. *hc*, G. Haigh, Holmfirth; H. Beldon; A. Wilman, Dewsbury Moor; W. McMellon, Glossop; W. Johnson, Highstown.
Hamburghs —*Gold or Silver-pencilled.*—1 and 2, H. Beldon. 3, W. Johnson. *hc*, J. Anderton, Gilstead; J. Roberts, Holmfirth.
Game —1, E. Aykroyd, Eccleshill, Leeds. 2, A. Sugden. 3, W. Ormerod. *hc*, W. Jagger, Wakefield; J. F. Walton; H. Walker; R. Walker, Gomersal; W. Tillotson, Leeds; F. Sales; D. Clayton. *c*, G. White.
Any other Variety except Bantams.—Cup and 1, H. Beldon. 2, E. Walton. 3, W. Bentley. *vhc*, H. Beldon; W. Harvey; A. & W. H. Silvester, Sheffield. *hc*, J. F. Walton; W. H. Crewe; H. Grant, Bradford.
Bantams.—*Game.*—1, B. Taylor, Heckmondwike. 2, A. Sugden, Cleckheaton. 3, F. Holt, Dewsbury. *vhc*, E. Walton, Rawtenstall; B. Firth, Heckmondwike. *hc*, A. Smith, Halifax; H. H. Thompson, Sunderland; W. Backerville, Manchester. *c*, J. Crosland, jun.; A. Smith; E. Farrington; J. Forsyth.
Bantams —*Any other variety.*—1, H. Beldon. 2, R. H. Ashton, Manchester. 3, A. Smith. *hc*, A. Smith; C. & J. Illingworth, Hightown; J. Walker. *c*, A. F. Umpleby.
Selling Class.—1, J. White, Wakefield. 2, H. J. Storer, Penkridge. 3, R. Walker. *vhc*, J. Heeley, Huddersfield. *hc*, W. Wright, Holmfirth; W. Bentley; G. Carter, Bedale; W. H. Crewe; J. Staley, Newark; S. Lord; A. & W. H. Silvester. *c*, H. Digby, Lindley; W. Peace; W. Wright, Holmfirth; W. Whitaker; H. Beldon; H. Walker; J. Walker; W. Harvey.
Ducks.—*Rouen.*—1, J. Walker. 2 and 3, F. G. S. Rawson, Halifax. *hc*, G. Watkinson, Liverpool; J. White; J. R. Pollard, Wibsey; B. Parkinson; G. Marshall, Earlsheaton. *c*, J. Roberts. *Aylesbury.*—1, C. Holt. 2 and 3, J. Walker. *c*, G. Watkinson.

LOCAL CLASSES.

Cochins.—Cup and 1, J. Brooke. 2 and *c*, North & Wood. 3, J. Fox. *hc*, C. Rhodes; North & Wood.
Brahmas.—*Dark.*—1, North & Wood. 2 and *vhc*, J. Fox. 3 and *hc*, H. Digby. *c*, J. W. Rhodes; J. & R. Broadhead. *Light.*—1, G. Heap. 2, H. Digby. 3, A. H. Haigh.
Hamburghs.—*Gold or Silver-spangled* —1, G. S. Jarmain. 2, S. Arnold. 3, G. Blackburn. *c*, H. Digby; T. Stringer; J. Lancaster. *Gold or Silver-pencilled.* —1 and 3, H. Digby. 2, G. Blackburn.
Game.—1, W. Sugden. 2, J. Brooke. 3, G. Nicholson.
Any other Variety except Bantams.—1, North & Wood. 2, B. Boothroyd. 3, S. Arnold. *c*, H. Digby; G. Blackburn.
Bantams.—*Game.*—1, J. Rushworth. 2, North & Wood. 3, J. Popplewell. *hc*, A. L. Jordan; J. Brooke. *c*, J. & R. Broadhead. *Any other variety.*—1, J. Brooke. 2, S. W. Anderson. 3 and *hc*, North & Wood.
Selling Class.—1, G. Blackburn. 2, G. Heathwaite. *hc*, S. Arnold; H. Digby (2). *c*, J. Brooke; C. O. Harling.
Ducks.—*Rouen.*—2, W. V. Wilkinson. 3, J. Fairley. *hc*, S. Wilson; H. Digby. *Aylesbury.*—1, North & Wood, Huddersfield. 2 and *hc*, H. Digby. 3, J. Hey. *c*, T. Moody.

PIGEONS.

Pouters.—*Cock or Hen.*—Cup, 1, and 2, W. Harvey. 3, A. Spencer. *hc*, S. Dronsfield, Oldham; W. Nottage; J. Hawley; G. J. Taylor, Fartown. *c*, G. J. Taylor.
Carriers.—1, Miss F. Seanor, Leeds. 2, W. Sefton, Blackburn. 3, J. Hawley. *hc*, J. Smithers, Sheffield; Miss F. Seanor; J. C. Ainsworth, Bury; W. Sefton; W. H. A. Miller. *c*, H. Simpson, jun. (2).
Tumblers —*Almond.*—*Cock or Hen.*—1 and 3, A. & W. H. Silvester. 2, S. Lawson, Preston. *Any other variety* —*Cock or Hen.*—1, J. Hawley. 2, A. & W. H. Silvester. 3, J. Walker. *hc*, J. Walker; W. Brydone, Dewse; A. & W. H. Silvester. *c*, W. Moore.
Antwerps.—*Cock or Hen.*—1, R. Brierley. 2, J. Crosland, jun. 3, Waddington & Booth. *vhc*, J. Crosland, jun.; F. Steel. *hc*, R. Brierley; J. Holden; S. Lawson; J. C. Ainsworth. *c*, C. Sutcliffe; J. Smithers.
Jacobins.—*Cock or Hen.*—1, J. Smith. 2, W. Brydone. 3, G. J. Taylor. *hc*, J. Smith; S. Lawton (2); W. Harvey; F. Steel; G. J. Taylor (3).
Trumpeters. - *Cock or Hen* —1 and 2, W. Harvey. 3, J. Earnshaw.
Turbits.—*Cock or Hen.*—1, J. Walker. 2 and 3, A. & W. H. Silvester. *hc*, H. G. Poole; W. Moore; J. Walker; R. Woods; W. Brydone; G. J. Taylor. *c*, R. Woods.
Fantails.—*Cock or Hen.*—1, J. Walker. 2, F. Steel. 3, J. F. Loversidge. *vhc*, W. Lumb. *hc*, J. F. Loversidge; J. Walker; F. Steel. *c*, W. Harvey.
Barbs.—*Cock or Hen.*—1, 2, and *vhc*, J. Firth, Leeds. 2, W. Harvey. *hc*, S. Dronsfield; J. Thresh; W. Harvey. *c*, J. Thresh; W. Brydone.
Dragoons.—*Cock or Hen.*—1, W. Sefton. 2, A. Roote, Crewe. 3, J. G. Dunn, Ryton. *hc*, W. Marchant, Halifax; S. Dronsfield (2); R. Woods (2); Miss Seanor; W. Sefton; Waddington & Booth, Burnley. *c*, R. Woods; W. Sefton.
Any other Variety.—*Cock or Hen.*—1, J. Thresh. 2, G. J. Taylor. Extra 2, S. Dronsfield. 3, F. Steel. Extra 3, W. Harvey. *hc*, S. Dronsfield; W. Harvey; A. & W. H. Silvester (2); F. Steel; G. J. Taylor.
Selling Class.—*Cock or Hen.*—1, W. Brydone. 2, W. Harvey. 3, A. & W. H. Silvester. *hc*, W. H. A. Miller, Walsall.

LOCAL CLASSES.

Pouters.—*Cock or Hen.*—1 and 2, J. H. Sykes, Huddersfield.
Carriers.—*Cock or Hen.*—1, 2, and 3, J. H. Sykes.
Tumblers.—*Cock or Hen.*—1 and 2, J. H. Sykes. 3, J. B. Hogley.
Trumpeters.—*Cock or Hen.*—1, J. H. Jordan. 2 and 3, J. H. Sykes.
Fantails.—*Cock or Hen.*—1 and 2, J. H. Sykes. 3, J. W. Rhodes.
Barbs.—*Cock or Hen.*—1 and 2, J. H. Jordan. 3, J. H. Sykes. *c*, A. Broughton; J. H. Sykes.
Dragoons or Antwerps.—*Cock or Hen.*—1, A. Broughton. 2, T. Iredale.
Any other Variety.—*Cock or Hen.*—1, G. Fewsdale. 2, J. H. Sykes. 3, T. Milnes.
Selling Class.—*Cock or Hen.*—1, S. W. Anderson. 2, T. Iredale. 3, J. Blackburn.

RABBITS.

Lop-eared.—*Buck or Doe.*—1, J. Boyle, Blackburn. 2, T. Myton, York. 3, T. Schofield, jun. *hc*, T. Schofield, jun. (4); J. Quick, London (3); T. Davis Southwell; J. Irving, Blackburn (2). *c*, J. Irving; W. B. Mapplebeck, jun., Birmingham (2).
Silver-Grey.—*Buck or Doe.*—Cup and 1, Miss Mortimer, Roes. 2 and Extra 3, A. Hudson, Hull. Extra 2, J. Hallas, Huddersfield. 3, J. Firth.
Himalayan.—*Buck or Doe* —1, S. Ball, Bradford. 2, Dr. J. D. Eames, Great Driffield. 3, G. Wilson, Huddersfield. *hc*, J. T. H. Chappell, Rochdale (2); J. Hallas; J. H. Hedley, Hexham.
Angora.—*Buck or Doe.*—1 and 3, H. Swetnam, York. 2, Hutton & Gelder, Bradford. *hc*, L. Turner; E. Walton; S. Ball; J. T. H. Chappell. *c*, L. Turner; W. Russell, Hull; J. Blakey; S. Buckley.
Any other Variety.—*Buck or Doe.*—1 and *vhc*, J. Hallas. 2, M. Marsland. 3, A. Lund, York. *hc*, T. Schofield, jun.; J. T. Billett, jun.; H. E. Gilbert, Rugby; W. Russell; J. Hallas; J. T. H. Chappell. *c*, J. Tebbutt; A. Hudson (2); J. Hallas.
Selling Class.—1, A. W. Whitehouse, Northampton. 2, C. King, London. 3, J. Roberts, Deighton. *hc*, S. Hinchcliffe, Huddersfield; T. Schofield, jun.; J. Quick (3); C. King; A. Hudson; S. Ball; F. Sabbage, Northampton; J. Hallas. *c*, J. Hallas.
Local Class.—*Any variety.*—*Buck or Doe.*—1 and 3, J. Hallas. 2, A. Atkinson, Huddersfield.

CATS.

Tortoiseshell or Tortoiseshell-and-white.—1, B. Charlesworth, Lonewood. 1, R. Redshaw, Huddersfield. 3, W. Greenwood, Huddersfield. *hc*, D. Woffenden.

Persian or Angora.—1, W. Sims, Moldgreen. 2, Mrs. Morrison. 3, Miss Armitage, Huddersfield.

Any other Variety.—1, Miss Learoyd, Huddersfield. 2, J. C. Sykes, Huddersfield. 3, J. H. Crowther, Huddersfield. *vhc*, Miss I. Cheesbrough, Leeds. *hc*, Miss E. Spivey, Huddersfield; D. Bottomley; H. Wigney, Huddersfield; Miss Caygill; A. Oxley; W. B. Mapplebeck, jun.; J. Cowgill, Huddersfield. *c*, J. Hellewell.

The Judges were Messrs. Wm. Cannan, Bradford; and E. Hutton, Pudsey, Leeds.

FORFAR POULTRY SHOW.

This Show was held on January 1st and 2nd in the Reid Hall, Forfar, and was an excellent display, more especially of Game fowls, which muster strongly there.

The schedule opened with Black Red *Game* cocks, of which twenty-one entered. We did not at all like the first-prize bird, it was short in neck and leg, and not at all equal to pen 15, unnoticed; second and third were good, as also 16, highly commended. Black Red Game hens were a grand lot, but the pens they were shown in too narrow. Every bird was good, but the winners were all there. Brown Red Game cocks were headed by a fine bird, as were the Brown Red hens, the latter taking the cup for the best Game bird. Second was a fine hen, fully better in some respects than first; but no one could quarrel with the judgment. Game cocks, Any other colour, first a splendid Pile; second ditto; third Duckwing. Hens of the same reversed this order, Duckwing being first (a beauty); ditto third; Pile second. Black Red Game *Bantam* cocks came next. Here we could not agree with the Judge; the second was much more stylish and smaller, the latter a point too often forgotten in judging this variety; third was not a nice bird. Cocks, Any other colour, an easy win for one of Mr. Brownlie's little Piles. In Any other variety Bantams, first were Blacks, but we much preferred a pen of really first-rate Silver Sebrights, which were unnoticed. *Hamburghs* were numerous and good in all classes, which may also be said of *Dorkings* and *Spanish*. *Brahmas* were very good; the first three cocks had little white. Hens were extra fine. *Cochin* cocks saw a large Partridge first and cup, shown in bad light, or the Judge must have seen his red breast and fluff; second was a fine Buff. Hens were good; first a nice bird, as were the other prize-winners.

Pigeons were not very numerous. In *Pouters* a pair of fair Blacks first. *Carriers* only one good pair. *Fantails* were better, all being good, but the winners much the best. *Tumblers* contained some good birds, first going to good-headed Black Mottles; second and third Almonds. There were some good *Jacobins* shown, while first in the Variety class went to good Yellow Barbs; second a nice pair of Ice.

The Show was well conducted, except that the Hall was excessively cold, no effort being made to heat it. Some of the water dishes were frozen to the bottom. By the way, why don't the Committee have a Pigeon Judge, and thus induce more entries?

Game.—*Black Red.*—*Cock.*—1, S. Riach. 2, J. Mollison. 3, J. Nicoll. *hc*, W. Baillie; J. Mason. *Hen.*—1, C. Jamieson. 2, J. Mason. 3, W. Ferguson. *hc*, C. Jamieson (3); Boath & Tosh; J. Morrison. *c*, J. Richard.

Game.—*Brown Red.*—*Cock.*—1, T. Mason. 2, G. & A. Blair. 3, W. Nicol, jun. *Hen.*—1 and Cup, C. Jamieson. 2, J. Salmond. 3, D. Harley. *hc*, W. Nicol; J. Clark; T. W. Mitchell; G. & A. Blair.

Game.—*Any other colour.*—*Cock.*—1, D. Harley. 2, J. Welch. 3, G. & A. Blair. *Hen.*—1, D. Harley. 2, C. Jamieson. 3, J. Morrison. *hc*, J. Welch; D. Gibson; A. Dawson.

Game Bantams.—*Black Red.*—*Cock.*—1 and Cup, Mrs. J. Wilkinson. 2, R. Brownlie. 3, J. Ferry. *hc*, D. Teviotdale; J. Greive; A. Spence.

Game Bantams.—*Any other colour.*—*Cock.*—1, R. Brownlie. 2, T. Barker. 3, D. Teviotdale. *Hen.*—1 and 3, T. Barker. 2, W. C. Baxter. *hc*, R. Brownlie. *c*, G. Bell; T. Ritchie; Mrs. Abel.

Bantams.—*Any other variety.*—1, J. Taylor. 2, R. H. Ashton. 3, R. Frew. *c*, P. Symon.

Hamburghs.—*Spangled.*—*Cock.*—1 and Cup, R. M'Donald. 2, G. Campbell. 3, T. Thomson. *hc*, G. Stalker; D. Draper, jun.; W. Ferguson; J. Stewart; J. M. Campbell (2). *c*, E. Robinson. *Hen.*—1, J. M. Campbell. 2, G. Campbell. 3, H. Wilkinson. *hc*, J. M. Campbell; G. Campbell. *c*, H. Gibson.

Hamburghs.—*Pencilled.*—*Cock.*—1, J. Taylor. 2, W. Milne. 3, G. Caithness. *Hen.*—1 and 2, R. Dickson. 3, G. Caithness. *hc*, A. Pratt. *c*, J. Taylor.

Dorkings.—*Dark.*—*Cock.*—1 and Cup, Mrs. W. Chalmers. 2, J. Clark. 3, J. Turnbull. *hc*, A. Bruce; D. Draper, jun.; G. Cuthill; J. Turnbull; P. Lesslie; D. Gellatly. *Hen.*—1, 2, and 3, D. Gellatly. *hc*, Mrs. M. Chalmers; A. Bruce; D. Draper, jun.; J. Crawford; W. M'Intosh; J. Turnbull; P. Lesslie. *c*, P. Symon.

Dorkings.—*Any other colour.*—*Cock.*—1, W. Hendry. 2, J. Fothringham. 3, Mrs. J. Laird, jun. *hc*, D. Annan. *Hen.*—1 and *hc*, Mrs. J. Laird, jun. 2, Mrs. G. Armitstead. 3, J. Turnbull. *c*, W. Hendry; D. Gracie.

Brahma Pootra.—*Cock.*—1, J. A. Dempster. 2, J. Turnbull. 3, J. Smart. *hc*, A. Burnett. *Hen.*—1, H. Wyse. 2, J. Sandeman. 3, J. A. Dempster. *hc*, R. Brown; A. Burnett; H. Wilkinson. *c*, A. C. Russell; A. Fullick; W. Falknon.

Cochi China.—*Cock.*—1 and Cup, Mrs. G. Armitstead. 2, G. H. Procter. 3, Mrs. W. Steven. *hc*, A. C. Russell; R. Blyth; Mrs. W. Carnegy; W. M. J. Paton; Mrs. C. B. Taylor. *Hen.*—1, Mrs. W. Steven. 2, Mrs. W. Carnegy. 3, W. M. J. Paton. *hc*, W. M. J. Paton; G. E. Cartmell; D. Welch; J. Wyse. *c*, C. Jarvis.

Spanish.—*Cock.*—1, W. C. Hardie. 2, Mrs. W. Steven. 3, G. Stewart. *c*, H. Wilkinson. *Hen.*—1 and Cup, W. C. Hardie. 2, J. Crawford. 3, H. Wilkinson. *hc*, Mrs. W. Steven; D. Kidd; H. L. Horne.

Any other Variety.—*Cock.*—1, G. Caithness. 2, J. Taylor. 3, W. Linton (Crève-Cœur). *c*, J. Smart. *Hen.*—1, D. Draper, jun. 2, Mrs. C. B. Taylor. 3, J. M. Wilson. *hc*, Mrs. W. Steven; J. Taylor; W. Linton (Crève).

Selling Class.—*Cock.*—1, J. Morrison. 2, J. Macintosh. 3, W. Robertson. *hc*, J. Sontar; W. Falknor; A. Bruce; D. Morrison; Mrs. A. Duncan; J. Morrison; G. Cuthill; Mrs. J. Laird. *c*, P. Symon; G. Cuthill. *Hen.*—1, D. Gellatly. 2, A. Bruce. 3, D. Shepherd. *hc*, W. Stewart; J. Crawford.

PIGEONS.

Pouters.—1, J. Mullion. 2 and 3, F. M'Crae. *hc*, J. Mullion; F. M'Crae.

Carriers.—1, J. E. Spence. 2, R. J. Wilson. 3, J. R. Abel.

Fantails.—1, J. E. Spence. 2, W. Hendry. 3, J. Smart.

Tumblers.—1, J. Smart. 2 and 3, D. Kennedy.

Jacobins.—1 and 3, W. & R. Davidson. 2, W. Hendry. *hc*, J. Boath; J. E. Spence.

Any other Variety.—1, J. E. Spence. 2, J. Cowe (Ices). 3, J. Baxter (Dragoons). *c*, J. Boath (Archangels); I. M. Abel (Archangels); M. A. Frew.

CANARIES.

Scottish Fancy.—*Yellow.*—*Cock.*—1, W. & R. Davidson. 2, W. Wood. 3, A. Lowson. 4, W. Ferguson. *Hen.*—1, W. Wood. 2, A. Morris. 3, J. Shanks. 4, A. W. M'Kendrick.

Scottish Fancy.—*Buff.*—*Cock.*—1, F. Batchelor. 2, A. Morris. 3, G. Stewart. 4, A. Stewart.

Judge.—Mr. J. Martin.

HEXHAM POULTRY SHOW.

The third Show of the Hexham Ornithological Society was held on the 31st ult. and 1st inst. in the magnificent Corn Exchange. This Society is most flourishing, having by judicious management secured the confidence of the fancy, and the entries were extremely good. The pens were Fothergill's of Sunderland, and were well placed; but for the future we would certainly advise that the Hamburgh varieties and Selling classes be placed on the top tier in place of the Game and Game Bantams, for no judge can feel thoroughly satisfied after adjudicating upon these classes when placed at such a height; and these, being two of the leading ones, ought by all means to occupy a better position. All the specimens were well attended to; in fact the attendance was such as is rarely seen, large basketfuls of meal balls being in readiness on the arrival of the birds. An arrangement had been made to get all the birds that were entered at Huddersfield, but, the mail having missed at York, a large number did not arrive till one o'clock, and yet the Committee were so kind as to wait for them; but this threw the judging till very late, and the consequence was that it was far past daylight when the arbitrations were completed in the Pigeons.

In poultry, *Cochins* came first, and these were a capital lot. First and cup for the section a massive pair of Buffs, second Whites, third Buffs, and very highly commended Whites. *Brahmas* were also a good lot; the first adult well developed and good in colour; second chickens, as also the third. *Dorkings* were but poor. *Spanish* good, but not numerous. *Hamburghs* were mixed classes, and only good as regards the prizewinners. The first Gold-pencils were very good. *Polish*, all noticed, were first and third Gold, and second White-crested Black. *French* were a fair class. The section cup pen, a grand pair of La Flèche, won the first here; second a very good pair of Houdans. *Malays* were a fair lot and all Reds. *Game* were next, Reds being a heavy class. First a handsome pair of Brown Red chickens; second also Brown Reds, and third Black Reds; the pullet in this pen spoiling their chance with colour, being too red. In the following class was one of the best pens of Duckwing chickens we have seen this season, and the cup for Game was awarded here. Red Game *Bantams* were a large class, and, as before stated, were very difficult to handle, being placed too high. The winners were all Black Reds, the first and second chickens, and third old birds, most of the birds being full of style and quality; the first very smart and stylish. In the following class the whole of the prizes were won by the same exhibitors, the first to Piles, and second and third to Duckwings; but the latter were not well matched, one pen containing a grand cockerel, and the other a capital pullet. In the next class Silver Sebrights were first, and Blacks second and third. Single Bantam cocks were a capital lot, the first and cup for Bantams going to one of the best Black Reds we have ever seen—a bird, in fact, that compels us to ask, Where can the next improvement be made? The second and third, also Black Reds, were very good. In the Variety class the first were a fine pen of Turkeys, second Black Hamburghs, and third Guinea Fowls. *Ducks* were very good throughout, and the cup awarded to a massive pair of Aylesburys. The Selling classes were very large, and many very good birds competed, eighty-nine pens in all.

Pigeons had an excellent room, the light being equal and good in all points, the Pouters placed in a grand position for showing themselves. Black Red and Yellow cocks were a capital lot, but the cup was won by a large Yellow hen. In Any other colour were thirteen good Blue cocks, but the first went to a capital White. Both classes of Carriers were very good; the cup was won by a good Dun cock. In young birds several were unnoticed by the Judge as looking too old. Almonds were a wonderful class, while in the other colours were some capital headed birds, first going to a splendid Yellow Whole-feather, second to Black Mottle, and third to Yellow Agate. Barbs were good, Dun first, Black second, and Yellow third. Foreign Owls were a capital lot; the first and third White, and second Blue. Jacobins were both good classes; as also the Dragoons, and birds of the right stamp being placed in all cases. In Short-faced Antwerps Mr. Gamon cleared the deck with some good birds, his old Red Chequer being placed first; but we must

confess a preference for that gentleman's Silver Dun. Long-faced were very good and well placed; and English Owls a grand class. After this point the birds were judged under great disadvantage, it being dark, and the hall had to be lighted. There were three classes for Turbits, and these well filled, and some exquisite birds were shown. Long-faced Tumblers were also provided with three classes, and these were very good, especially the Mottles in the Variety class. Frillbacks had also a class, and here Mr. Ord was to the front with some grand birds; we think and hope with those that were lost in transit from the Washington Show. Nuns were all Black; but in Magpies the first was Yellow, second Red, and third Black. In the next class Mr. Yardley won the cup with his Satinette, the second going to an Ice, and third to Turbiteens. There were some good birds in the Selling classes; but these were not proportionately large with the poultry classes.

The show of *Cage Birds* was large and good.

Lop-eared *Rabbits* were but moderate, but the variety good, but many pens were empty in this section, no doubt on account of the intense cold.

Cats were provided with two classes, and the entries very good; but the Long-haired were but moderate in quality. In the Variety class were some handsome Cats; the first a Silver-Grey Tabby; second Tortoiseshell of fair quality; and third Black, many others being noticed, and an extra prize awarded. These were mostly by local exhibitors, and they were certainly a great credit to the exhibitors.

COCHINS.—1, Cup, and 2, G. H. Procter, Durham. 3, G. E. Cartmel, Kendal. *vhc*, J. Benn, Matfen. *hc*, W. Stephenson, Dudley; Mrs. Lowray, Corbridge. *c*, I. Baty, jun., Hexham.

BRAHMA POOTRAS.—1, J. Watts, King's Heath, Birmingham. 2, R. Maxwell, Dumfries. 3, H. Wilkinson, Earby. *vhc*, W. Swann, Bedlington. *hc*, T. Allan; W. Nattrass, Alston; T. Webb, Sutton Coldfield. *c*, J. H. Davison; Mrs. Elliason.

DORKINGS.—1, G. Pounder, Kirby Moorside. 2. J. Coulson, Shotley Bridge. 3, J. Watts. *hc*, Simpson & Dodd, Bedale; R. Reed, Hollinhurst. *c*, R. Reed.

SPANISH.—1, H. Wilkinson. 2, Willoughby & Purvis, Hexham. 3, W. Jagga, Blyth.

HAMBURGHS (Gold or Silver-spangled).—1, J. Stewart, Dudley. 2, R. Keenleyside, Aycliffe. 3, G. Dodd, Clowsgillhouse. *hc*, G. Alderson, Hartlepool; D. C. Cheyne, Cowpen.

HAMBURGHS (Gold or Silver-pencilled)—1, D. C. Cheyne. 2, W. Dixon, jun., Shipley. 3, R. Blackburn, New Choppington. *vhc*, Parsons & Wilson, Bedlington. *hc*, A. S. Stephenson, Dudley; G. Alderson; Robson & Linton, Crook; B. Myers, Birtswith *c*, Robertshaw & Dean, Ovenden; W. Wilson.

POLISH.—1, T. Dean, Keighley. 2, T. Webb. 3, J. T. Proud, Binchester. *hc*, Parsons & Wilson. *c*, J. Jackson.

FRENCH.—1 and Cup, E. Walton, Hornclife. 2, J. G. Milner, Hamsterley. 3, H. Robinson, Wigton. *vhc*, G. A. Tate, South Shields. *hc*, M. Lamb; J. Bedn.

MALAYS.—1, J. F. Walton, Rawtenstall. 2, R. Hawkins, Seaham. 3, E. Symons, Hebburn New Town.

GAME (Black or Brown Reds).—1, W. Ormarod, Walsden. 2, H. Leighton, Milnthorpe. 3, Miss M. J. Nelson, Cockshaw. *vhc*, T. Dodd, Seaton Burn. *hc*, J. Stark; Mrs. M. Young, Bebside; J. Durning; Webster & Adams; R. White; Miss M. J. Nelson. *c*, T. Young.

GAME (Any other colour).—1 and Cup, Miss M. J. Nelson. 2, J. F. Walton. 3, T. Young, Morpeth. *hc*, Webster & Adams, Beverley; R. White, Cockshaw. *c*, W. Teasdale.

GAME BANTAMS (Black or Brown Reds).—1, E. Walton. 2, W. Atkinson, Kendal. 3, W. Wardle, South Goaforth. *vhc*, G. Bell, North Seaton; Miss M. J. Nelson. *hc*, J. Short; T. Hedley, Hexham; R. Smith; Webster & Adams; Miss M. J. Nelson. *c*, W. Atkinson; R. White.

GAME BANTAMS (Any other colour).—1, 2, and 3, Miss M. J. Nelson. *hc*, E. Walton; J. Cook; R. White; Mrs. J. Dye, Hexham. *c*, G. F. Hedley.

BANTAMS (Any variety except Game).—1, T. P. Carver, Langthorpe. 2, J. Watts. 3, R. H. Ashton, Muttram. *vhc*, J. G. Milner. *hc*, J. Durning.

BAMTAMS (Any variety).—*Cock.*—1 and Cup, Miss M. J. Nelson. 2, M. Young. *vhc*, J. Short. *hc*, H. H. Thompson; W. Wardle; J. Cooke. *c*, R. Hope; H. H. Thompson; W. Atkinson; E. Walton.

BARN-DOOR FOWLS.—1, G. Robinson, North Frodingham. 2, G. Pounder, Blackburn. 3, H. Cotes, Darlington. *hc*, G. Robinson; J. Gales.

ANY OTHER VARIETY.—1, J. T. Prond. 2, T. P. Carver. 3, W. H. Young, Driffield. *vhc*, T. Marplaa. *hc*, E. Walker; W. Wilson. *c*, Miss G. B. Elliott; H. A. Cave.

DUCKS (Aylesbury).—1 and Cup, W. Stonehouse, Whitby. 2. T. P. Carver. 3, G. Surtees, Hesley. *hc*, Robson & Linton; C. Holt. *c*, F. E. Gibson.

DUCKS (Any other variety).—1, Miss M. J. Nelson. 2, R. White. 3, W. Swann. *vhc*, T. Wakefield. *hc*, Mrs. Lowrey; Miss M. J. Nelson. *c*, Miss J. Walker.

SELLING CLASS.—*Cock or Drake.*—1, Mrs. W. Ridley, Hexham. 2, J. S. Rooth, Chesterfield. 3, G. E. Cartmel. 4, D. & J. Ibetson, Whitby. 5. E. G. Reay, Birmingham. *vhc*, Webster & Adams. *hc*, T. Dobson; J. Watts; G. H Procter; C. Venables, Castle Eden; H. Dale; G. Dodd; W. Ormerod; J. T. Proud; R. Smith; J. H. Davison; B. Myers; J. Pattison; G. F. Hedley; J. Barkas, Stanhope; R. Reed; Guthrie & Hope, Hexham. *c*, G. Pounder; T. Wakefield; T. Young; G. A. Tate; G. H. Procter; Mrs. Lowrey; Miss M. J. Nelson.

SELLING CLASS.—*Hens or Ducks.*—1, Webster & Adams. 2, J. Short, Bedlington. 3, E. G. Reay, Birmingham. 4, Willoughby & Purvis, Hexham. 5, J. S. Rooth. *vhc*, G. H. Procter. *hc*, J. T. Proud; H. Civil, Hexham. *c*, T. Webb; T. A. Tata; J. Ridley, Tanfield Lea.

LOCAL CLASS.—*Chickens.*—1, M. Wilson, Anick. 2, 1. Baty, jun. 3, Miss M. J. Nelson. *hc*, W. Murray, Hexham; T. Newbegin.

PIGEONS.

POUTERS (Black, Red, or Yellow).—*Cocks.*—1, H. Pratt, Hampton-in-Arden. 2, E. Beckwith, Monkwearmouth. 3, R. Fulton, New Cross, London. *vhc*, Ridley & Dye, Hexham. *hc*, Ridley & Dye. *c*, J. M'Culloch, Moss Bank, Glasgow; R. H. Blacklock.

POUTERS (Black, Red or Yellow).—*Hens.*—1 and Cup, H. Pratt. 2, Ridley and Dye. 3, E. Beckwith. *hc*, J. M'Culloch; J. Baker, Kew Bridge, London. *c*, R. H. Blacklock, Sunderland; R. White.

POUTERS (Any other colour).—*Cocks.*—1, Guthrie & Hope. 2, Ridley & Dye. 3, R. H. Blacklock. *vhc*, H. Simpson, Cramlington. *hc*, J. M'Culloch; J. Baker. *c*, R. H. Blacklock; H. Pratt.

POUTERS (Any other colour).—*Hens.*—1, R. Fulton. 2, H. Simpson. 3, J. Baker. *vhc*, Ridley & Dye. *hc*, H. Pratt. *c*, J. M'Culloch; Ridley & Dye.

CARRIERS (Any colour).—*Cocks.*—1 and *vhc*, Ridley & Dye. 2 and 3, R. Fulton. *hc*, G. F. & A. T. Umpleby, Boroughbridge; E. Beckwith. *c*, J. & W. Towerson, Egremont.

CARRIERS (Any colour).—*Hens.*—1 and *vhc*, Ridley & Dye. 2 and 3, R. Fulton. *hc*, H. Yardley; W. H. A. Miller. *c*, E. Beckwith.

CARRIERS (Any colour).—*Young.*—1, G. F. & A. T. Umpleby. 2, J. Baker. 3, A. E. Massey, Spalding. *vhc*, J. Stanley, Salford. *hc*, H. Cockton, Middlesborough. *c*, A. N. Dodds, North Shields.

TUMBLERS (Short-faced Almonds).—1 and Cup, Webster & Adams. 2, R. Fulton. 3, W. R. Pratt. *vhc*, Webster & Adams. *hc*, R. Fulton. *c*, T. Rule; E. Beckwith.

TUMBLERS (Short-faced, any other colour)—1, Webster & Adams. 2, R. Fulton. 3, H. Yardley. *vhc*, R. Fulton. *hc*, E. Beckwith. *c*, J. Baker; W. B. Mapplebeck, jun.

BARBS.—1 and 3, R. Fulton. 2, J. Baker. *hc*, H. B. Massey. *c*, J. Stanley.

OWLS (Foreign).—1, J. J. Sparrow, Berkley Square, London. 2, T. Rule, Durham. 3, W. H. A. Miller, Walsall. *vhc*, W. Brydone, Langton Mains. *hc*, G. Alderson. *c*, J. J. Sparrow.

TRUMPETERS.—1 and 3, R. Fulton. 2, J. Lederer, Bootle. *hc*, T. Rule. *c*, J. and W. Towerson.

JACOBINS (Red or Yellow).—1 and 2, R. Fulton. 3, H. W. Webb, Lower Sydenham. *vhc*, W. Brydone. *hc*, W. Beckwith. *c*, G. Sadler; R. W. Richardson, Beverley; J. Baker.

JACOBINS (Any other colour).—1, R. Fulton. 2, J. Baker. 3, J. Thompson, Bingley. *hc*, T. Rule.

FANTAILS.—1, A. Smith. 2 and *c*, E. Beckwith. 3, T. Rule. *vhc*, J. F. Loversidge. *hc*, T. Rule.

DRAGOONS (Blue or Silver).—1, Ward & Rhodes, Otley. 2, W. Sefton, Blackburn. 3, W. Smith, Liverpool. *vhc*, W. Sefton. *hc*, W. Gamon; H. Yardley; W. Sefton. *c*, A. McKenzie, Liverpool; R. Fulton; Guthrie & Hope.

DRAGOONS (Any other colour).—1, F. Grnham, South Birkenhead. 2, R. Woods, Mansfield. 3, J. Watts. *vhc*, J. G. Dunn, Ryton. *hc*, F. Graham; J. G. Dunn. *c*, R. Robson, jun., Newcastle.

ANTWERPS (Short-faced).—1, 2, and 3, W. Gamon. *hc*, H. Yardley; J. Stanley. *c*, J. Lister, Keighley; J. Stanley.

ANTWERPS (Long-faced).—1, J. Lister. 2, W. Gamon. 3, J. Robertshaw, Thornton. *vhc*, W. R Pratt. *hc*, T. H. Stretch; W. Gamon. *c*, W. Gamon; R. J. Smith; Miss M. A. Clemitson, Hexham.

OWLS (English).—1, Ward & Rhodes. 2, J. Young, Bishop Auckland. 3, Miss M. A. Clemitson. *vhc*, J. W. Edge, Nuhills, Birmingham; Miss M. A. Clemitson. *hc*, W. H. A. Miller; Miss M. A. Clemitson (2).

TURBITS (Blue or Silver, Point-headed).—1, W. H. A. Miller. 2, J. Baker. 3, T. Gallon, Felling. *vhc*, M. J. Green, Hexham. *hc*, W. Croft, Killinghall, Ripley. *c*, Ridley & Dye.

TURBITS (Any other colour, Point-headed).—1 and 2, W. Croft. 3, J. Lister. *vhc*, T. Gallon. *hc*, T. S. Stephenson; H. Simpson. *c*, J. H. Hedley; J. G. Orr, Beith; M. Green, Hexham.

TURBITS (Any colour, Shell-crowned).—1, T. Gallon. 2, T. P. Carver. 3, Ridley and Dye. *vhc*, J. Baker. *hc*, W. Croft. *c*, W. Brydons; W. Croft.

TUMBLERS (Long-faced Almonds).—1, J. H. Hope, Hexham. 2, J. J. Runciman, Newcastle. 3 and *vhc*, E. Walker, Hexham. *hc*, T. C. Taylor. *c*, E. Beckwith.

TUMBLERS (Long-faced Balds).—1 and *vhc*, W. Hill, Manchester. 2, A. Jackson, Chequerbent. 3, A. J. Sticks, Newcastle. *hc*, J. Watts; T. E. Stephenson; W. J. Donkin, Newcastle. *c*, A. Jackson (3).

TUMBLERS (Long-faced Beards).—1, *hc*, and *c*, Ridley & Dye. 2, E. Beckwith. 3, W. Hill. *vhc*, J. Murray, Ouschurn.

TUMBLERS (Long-faced, any other colour).—1, J. Ford, London. 2, W. B. Mapplebeck, jun. 3, J. Watts. *vhc*, J. G. Orr. *hc*, W. Hill (2); Ridley & Dye. *c*, W. A. Hyde; Miss M. A. Clemitson.

FRILLBACKS.—1, 3, and *c*, M. Ord, Sedgfield. 2, J. & W. Towerson. *hc*, H. W. Webb.

NUNS.—1, W. Croft. 2, T. P. Carver. 3, J. Watts. *vhc*, R. W. Richardson. *hc*, J. Baker. *c*, W. Croft.

MAGPIES.—1 and 2, P. Wilson, Pegswood. 3, J. Bakar. *vhc*, J. Watts, *hc*, E. Beckwith. *c*, M. Ord.

ANY OTHER VARIETY.—1, H. Yardley. 2, M. Ord. 3, R. Fulton. *vhc*, J. Watts. *hc*, J. Watts; T. Gallon. *c*, J. & W. Towerson; H. W. Webb.

SELLING CLASS.—*Pair.*—1, G. F. & A. T. Umpleby. 2, J. Murray. 3, H. Simpson. 4, W. F. Clark, Newcastle. 5, J. F. Loveraidge. *vhc*, J. Thompson; J. Smart. *hc*, J. Watts; E. Beckwith. *c*, W. Nottage; J. Smart.

SELLING CLASS.—*Single Bird.*—1, A. B. Massey. 2, G. F. & A. T. Umpleby. 3, J. Young. 4, W. Moore, Pickering. 5, T. Paxton, Hexham. *vhc*, Ridley and Dye; Guthrie & Hope. *hc*, J. Robertshaw; Ward & Rhodes. *c*, Ridley & Dye; E. Beckwith; J. Young.

CAGE BIRDS.

BELGIANS.—1, 2, and 3, J. Rutter, Sunderland.

NORWICH.—1, J. Stephens, Middlesborough. 2, T. Tenniswood, North Acklam. 3, Cleminson & Ellerton, Darlington. *vhc*, W. Smith, Birmingham. *c*, M. P. Potts, Leadgate (2); J. Bexson, Derby; A. Armstrong, Newcastle (2); W. Smith (2); Cleminson & Ellerton; Baxter & Percival, Newcastle.

CREST (Any variety).—1 and *hc*, W. J. Hampton, Darlington. 2, B. Hackworth, Newcastle. 3, Baxter & Percival.

LIZARD.—1 and 2, R. Ritchie, Darlington. 3, Cleminson & Ellerton.

EVEN-MARKED (Any breed).—1, T. Clemitson. 2, J. Rutter. 3, J. Gilhespie. *vhc*, W. Henderson, Whithy; J. Gilhespie. *hc*, W. C. Burniston, Middlesborough; T. Bainbridge.

CINNAMON.—1 and 2, Cleminson & Ellerton. 3, W. Smith. *c*, R. Hawman; W. Smith.

GLASGOW DONS.—1, T. Smith, Newcastle. 2, W. Clark. 3, J. Davison, Seaton Burn. *vhc*, W. Clark; C. Hobkirk, Newcastle. *hc*, H. Armstrong *c*, W. Redhead; J. Davison; W. Clark; R. Gilhespie.

GREEN CANARY.—1, H. Armstrong, Newcastle. 2 and 3, J. Allison. *vhc*, W. Redhead. *hc*, J. Stephens; T. Tenniswood. *c*, Robson & Linton.

MULE (Clear or Marked).—1, R. Hawman. 2, J. Stevens. 3, G. Stephenson. *vhc*, J. Bexson.

MULE (Dark).—1, R. Simpson, Whithy. 2, R. Hawman, Middlesborough. 3, J. Bexson.

GOLDFINCH (Moulted).—1, W. & C. Burniston. 2, W. Rogers. 3, Robson and Linton. *c*, G. Stewart.

LINNET (Moulted).—1, G. Stephenson, Gateshead. 2, T. Hedley. 3, W. Carrick, Middlesborough. *hc*, J. Maddison.

BRITISH BIRDS (Any other variety).—1, J. J. Jameson, Hexham. 2, Baxter and Percival. 3, R. Pearson, Whithy.

FOREIGN BIRDS (Any variety).—1 and Medal, T. Barrow, Monkwearmouth. 2, W. Haxwell, Newcastle. 3, Baxter & Percival. *hc*, E. Hutchinson.

COLLECTION OF SIX CAGE BIRDS.—1, Cleminson & Ellerton. 2, W. J. Hampton. 3, Baxter & Percival.

SELLING CLASS.—1, R. Simpson. 2, J. Bexson. 3, T. Clemitson. *hc*, W. & C. Burniston; J. Stevens; T. Clemitson; R. Pearson. *c*, W. Smith.

RABBITS.

LOP.—1, J. Murray, Ouschurn. 2, E. J. Tall. 3, J. Jackson, Tow Law. *hc*, T. Northorpe, Monkwearmouth; J. S. Robinson, Darlington; J. Lumaden, Gateshead. *c*, T. Northorpe.

ANY OTHER VARIETY.—1 and Medal, E. Walton, Hornclife. 2, 3, *vhc*, and *hc*, J. H. Hedley, Hexham.

CATS.

LONG-HAIRED.—1, 3, and *hc*, Mrs. E. Charlton, Hexham. 2, Mrs. F. J. Shields, Hexham. *c*, Dr. A. Hayes.

ANY OTHER VARIETY.—1, Mrs. F. J. Shields. 2, J. H. Hedley, Hexham. 3, J. Sargisson. 4, J. Robson. *vhc*, A. Scott, Hexham; W. Taylor, Hexham. *hc*, D. Nichol, Morpeth; M. Welch, Hexham; J. Hunter, Hexham; M. S Temple, Hexham. *c*, Miss H. F. Young, Hexham; J. Fenwick, Hexham; H. Lishman, Ryton-on-Tyne; R. White, Cockshaw.

The Judges were of—*Poultry, Rabbits, and Cats:* Mr. E. Hutton, Pudsey, Leeds. *Pigeons:* Mr. H. Allsop, Spencer

Street, Birmingham. *Cage Birds:* Mr. W. A. Blakston, Sunderland.

CUPAR ORNITHOLOGICAL SOCIETY'S SHOW.

THE first Show of poultry, Pigeons, and Canaries was held in the Corn Exchange, Cupar, on the 31st of December and 1st of January. There was a fair assemblage in most of the classes, as a pretty liberal schedule deserved. With some exceptions the quality was good throughout. Silver-Grey *Dorkings*, cock and hen, were a fair lot and well judged, which may be also said of the Dark Dorkings, which came next. The latter were not so good nor so numerous. *Spanish* were a capital class, first and second being specially notable; but the second we thought fully better than the first. *Brahmas* were very poor; the first-prize pen was one of the worst of them, the cock especially we could not see a single good point in. The next class was rather a mixture of nationalities, being for the best pen of *Scotch Greys* or *Polands*. First went to the former deservedly; second Golden Polands of small merit, seemingly introduced merely to countenance the foreign element in the class. *Cochins* were headed by a pen of Whites of no great merit, the cock being fully more yellow than white, and looking as if he had been overdone with washing-blue. Second were the best pen in the class, and should have been easily first. *Hamburghs* were divided into Spangled and Pencilled, and were the two best classes in the Show. In Spangled, first were good Silvers well placed; second and third Golden, all good. Pencilled were a fine lot, and must have troubled the Judge a good deal. First went to Golden, the hen in which was a beauty; but the cock, though otherwise good, had an ugly twisted neck-hackle. Second were Silvers: here again the hen was very good and the cock faulty. We liked the highly commended pen as well as any. *Game* were well judged, amongst them nothing noticeable. Game *Bantams* (Reds)—first one of the nicest pens we ever saw, only excelled by the same owner's well-known Pile in the next class, also an easy winner. Any other variety Bantams—first Silver Sebright, second Black, third Golden Sebright, all fairish birds. Any other variety contained some first-class birds, the pick of them being Mrs. Frew's very highly commended pen of Crêves. First were a pen of Houdans, fair birds, but not so good of their breed as pen 135, commended, also Houdans. Second were a pair of Silkies; third a pair of we don't know what—apparently meant for Leghorns, very ugly. *Ducks*, for which there were three classes, were both numerous and good, as were also *Turkeys*.

Pigeons were a small show. Pouters were fair; first and second Whites, third Reds. Fantails, first and second first-rate, others not worth taking home. Carriers had only three entries and the prizes withheld, Mr. Smith's pair of fine birds apparently frightening away all comers. Tumblers, no competition. Any other variety, a large class; first fine Dun Barbs, second and third Jacobins.

DORKINGS.—*Silver-Grey.*—1 and *hc*, D. Annan, Cupar. 2, Admiral Dongall' Scotscraig. 3, D. Sime, Letham. *c*, R. Blyth, Kettle. *Coloured.*—1, R. Boyle, Carnoustie. 2 and 3, D. Annan.

SPANISH.—1, W. Smith, Cupar. 2, J. Norval, Alloa. 3, W. M'Beath, Tillicoultry. *c*, J. Wright, Tillicoultry.

BRAHMAS.—1, Miss G. Morrison, Kirkcaldy. 2 and *hc*, W. G. Duncan, Dundee, 3, D. Annan. *c*, W. Bruce, St Andrew's.

SCOTCH GREY AND POLES.—1, D. Annan. 2, J. Laird, Johnstone. 3, R. Scott, Longrigg. *c*, D. Waldie, Edinburgh.

COCHIN-CHINA.—1, R. Blyth. 2, J. Ireland, Tayport. 3, J. Williamson, Edinburgh. *c*, G. Wilson.

HAMBURGHS.—*Spangled.*—1, Mrs Keddie, Cowdenbeath. 2, D. Jackson, jun.; Newburgh. 3, R. Clark, Newburgh. *hc*, J. Ireland; J. M'Andrew, Carnoustie; R. Clarke. *Pencilled.*—1, A. Pratt, Ceres. 2, R. Clarke. 3, A. Wallace, jun., Cupar. *hc*, J. Pratt. *c*, J. Miller, Falkland; A. Wallace, jun.; P. Campbell' Markinch.

GAME.—*Black or Brown Reds.*—1 and 2, R. Stewart, Blairadam. 3, R. Clark. *c*, A. W. Penman, Leslie. *Any other colour.*—1, R. Stewart, 2, J. Hall, Leslie. 3, Master A. Frew, Sinclairtown.

BANTAMS.—*Reds.*—1, R. Brownlie, Kirkcaldy. 2, D. Nairn, Cupar. 3, D. S. Edmond, Cupar. *hc*, Miss R. P. Frew. *c*, J. T. Cathcart, Pitcairlie. *Any other colour.*—1, R. Brownlie. 2, Miss R. C. Frew. 3, R. Anderson. *Any other variety.*—1, Miss R. Frew. 2, Miss B. P. Frew. 3, W. Phillips, Montrose.

ANY OTHER PURE BREED.—1, R. Blyth. 2, Miss J. M. Frew, Sinclairtown. 3, A. Angus, Kettle, *vhc*, Mrs. R. Frew, Sinclairtown. *hc*, J. Sandeman. *c*, J. Smart; Mrs. Dykes, Cupar.

DUCKS.—*Aylesbury.*—1, W. Bogie, Cupar. 2, R. Sorley, Lathrisk. 3 and *c*, J. Tod, Cupar. *Rouen.*—1 and 2, Admiral M. Dongall. 3, D. B. Meldrum, St, Andrews. *Any other pure breed.*—*hc*, J. Tod. *c*, J. T. Cathcart.

TURKEYS.—*Any variety.*—1, Mrs. Cathcart, Pitcairlie. 2 and *vhc*, D. Annan. 3 and *hc*, Admiral M. Dongall.

SELLING CLASS.—*Cock*—1, J. Curr, Newburgh. 2, R. Stewart. 3, T. Williamson, Falkland. *hc*, J. Curr, Newburgh; A. Pratt. *c*, J. Denmilne; R. Anderson; D. Annan. *Hens.*—1, A. Ridpath, Edinburgh. 2 and 3, D. Annan. *vhc*, A. Pratt, Kirkcaldy. *hc*, R. Anderson; T. Williamson. *c*, Miss A. B. Paul; G. Wallace; Miss R. Frew.

PIGEONS.

POUTERS.—*Any colour.*—1, 2, and 3, G. Henderson, Pitlessie. *c*, J. E. Spence.

FANTAILS.—*Any colour.*—1, A. Smith, Broughty Ferry. 2, J. E. Spence, Broughty Ferry. 3, D. L. Russell, Cupar.

CARRIERS.—*hc*, A. Smith.

ANY OTHER VARIETY.—1, J. E. Spence. 2, A. M'Conachie, Kirkcaldy. 3, J. T. Cathcart. *c*, R. J. Wilson.

SELLING CLASS.—1, J. E. Spence. 2, G. Grieve, Cupar. 3, Miss R. Frew, Kirkcaldy.

CANARIES.

SCOTCH FANCY.—*Yellow.*—*Cock.*—1, J. Pratt. 2, G. Paul, Glasgow. 3, W. Paton. *hc*, D. Stewart. *Hen.*—1 and 3, W. Paton. 2, J. Pratt. *hc*, J. Wright. *Buff.*—*Cock.*—1 and 2, W. Paton. 3, J. Culbert, Cupar. *Hen.*—1, D. Stewart, Cupar. 2, B. Currens, Cowdenbeath. 3, J. Culbert.

PIEBALD FANCY.—*Yellow.*—*Cock.*—1, R. Dalrymple, Dundee. 2, J. Pratt. 3, J. Culbert. *Hen.*—1, R. Dalrymple. 2, W. Paton. 3, J. Pratt. *Buff.*—*Cock.*—1 and 3, W. Paton. 2, B. Currens. *Hen.*—1, T. Curran, Cowdenbeath. 2, J. Thomson, Markinch. 3, G. Spence, Coalgate, Dysart.

MULES.—1, Mrs. W. Walker, Cupar. 2 and *c*, W. Kirk, Dunfermline. 3, T. Wotherspoon, Treulaws, Leslie, *hc*, D. Black, Ceres.

SELLING CLASS.—1, J. Stewart, Cupar. 2, J. Ramsay, Ferrybank, Cupar. 3, *hc*, and *c*, W. Paton.

RABBITS.—*Any breed.*—1, 2, and 3, D. L. Russell.

JUDGES.—*Poultry:* Mr. Brown, Perth. *Pigeons and Canaries:* Mr. McGill, Elie.

HITCHIN POULTRY SHOW.

THE second annual Show of the Herts and Beds Agricultural Society was held on December 31st and January 1st, at Hitchin. The Committee are to be congratulated on its great success both as to the number and quality of the birds, which far exceeded that of their Show last year. We only wish the Show-room had been better filled with visitors than it was on the first day. The management seemed excellent and orderly to the minutest detail. The cold was intense, and everything was done that could possibly contribute to the comfort of the birds. Little gas stoves were kept burning, and Spratt's food was given mixed hot with barleymeal and beer. One or two birds were cramped from their long cold journeys, but these were taken to a fire. If such care were only taken at all shows we should be much more willing to trust our best birds on long expeditions.

Dorkings were divided into two classes. The cup pair of Coloured birds were admirable, short on the leg and deep-breasted, and of the true Dorking type. Second were large and fine birds, but far longer on the leg. The third pen contained a beautiful cockerel with a fair pullet. Mr. Darby showed a nice Rose-combed pair, but the cock's comb apparently prevented their winning. In the class for Any other variety Dorkings a lovely White pair took the cup. We were sorry to see the cock's grand sickles broken from that common omission, a bit of canvas behind the open pens. Silvers were second, a large and handsome pair, but the hen somewhat red in wing. The third pen contained a spendid cockerel, but the hen seemed pinched with cold. *Cochins.*—The Buff class was poor. The first-prize pair were good, but the cock in the second pen had a bad comb, and the hen was poor and uneven in colour. We should have placed Mr. Burnell's highly-commended pen second, the only fault in it being that the hen was too pale to match the cock. The third-prize was the only patent error we saw in judging. They were in bad condition, and the hen had a darkly-striped neck-hackle. In the other Cochin class a noble pair of Partridge chickens were first. Second were Mr. Woodgate's Whites in excellent feather and trim, the cock singularly pure in colour. Third also went to Whites. Pen 42 (Fowler) contained beautifully-shown Whites, but the hen insufficiently feathered on the legs. In pen 41 (Shrimpton) was a very young and promising Partridge cockerel. Capt. Talbot's pens both appeared over-shown; the cock from one was obliged to be removed. *Brahmas.*—The cup pen for Darks contained an exquisitely-pencilled and now well-known pullet, the cock poorly feathered on leg and unequal to her. Mr. Lingwood took both second and third. We cannot say that we admire the style of tail of the second-prize cockerel. The hen in the third pen was a beautifully-pencilled bird, and the cock, though not large, a finely-shaped bird, and well feathered. The fourth pair were out of condition, and the hen coarse in pencilling. We liked pen 61 (Percival). In Lights the cup cock was a noble bird, slightly tinged with yellow, but otherwise good in every point; the hen perhaps hardly his equal. The second cock was decidedly small, but unexceptionable in points save white in his tail; the hen magnificently hackled, but she showed a little brown on the back. Third an excellent cock with beautifully-edged sickle; the hen poorly feathered, but very white. *Crèves.*—The cup cock was deficient in crest, but short-legged, and our ideal of a Crève in shape. Second cock magnificent in crest, but both he and the hen coarse in comb, and not in first-rate condition. Third was a grand cockerel, too long in the leg, still we should have put the pen second. Mr. Knight showed a nice pair. *Houdans.*—Here we did not entirely agree with the awards. In the first-prize pen the cock was very dark, with straw colour in his saddle hackle, and the hen small. Second a fine cock, to our idea somewhat too dark; the hen nicely mixed in colour, but not large. Mrs. Vallance's third-prize pen had fine tufts, and were excellent in colour; we should have placed them first. Mr. Quibell's very-highly-commended pen were decidedly good. *Game* had two classes. In that for Reds Mr. Matthew took the cup with a splendid pair of Brown Reds, entered as Black Reds. Mr. Pope's second-prize pen contained a perfect Black Red pullet. Brown Reds were third. In the other class Mr. Winwood was first with small Duckwings good in colour. Second were Piles. Pen 141 (Mason) contained a noble Duckwing cock, though too full in tail. *Spanish* were few, but good. The first pair excellent all round, young birds, and in beautiful condition. The face of the second cock singularly large and smooth. *Hamburghs* had five classes, and were a most remarkable lot for the south of England. The awards in these classes were not

finished when the doors were opened, and the Judge appeared to take immense pains in sifting their merits. Golden-spangles came first. The first-prize birds in faultless condition and good. Third coarse in comb. A nice pen of Mr. Tickner's would have won but for poor condition. The cup for the best pen of Hamburghs went to Mr. Beldon's Silver-spangles, a superb pair, with spangles beautifully round without being too dense. Third were neater birds than the second, but with less round spangling. In Golden-pencils there were seventeen entries, and the competition very close. Mr. Cresswell's first-prize cock was a beautiful bird, and the pullet wonderfully barred on the tail. Second also an excellent pair. The third cock by no means equal in comb to the first and second, but the hen well and evenly barred. Pen 173 (Long) were prevented by condition from winning. Silver-pencils were by no means equal to the Golden. The first cock had a nice tail, but his comb-peak was crooked. In Blacks the prize birds were good, the rest of the class not remarkable. *Any other variety.*—This class was not well filled, but the first (Golden) and the second (Silver) Polands were grand and valuable pens. The Local class was large and well filled. Cochins seem special favourites in these counties. *Bantams* had four classes. In that for Red Game the winners were all Black Reds. First very small; second a well-shaped cockerel; third very stylish. The Black Rose-combed were fair, but not remarkable. A rich-coloured, though somewhat large, pair of Gold-laced were first in the Variety class, and well-shown White-booted second. *Ducks* had four classes and one cup, which was awarded to Mrs. Acton Tindal's Aylesburys. They were apparently hard pressed by a gigantic pair of Mr. Fowler's.

Pigeons had nineteen classes and four cups between them. Days are now too short to examine every pen in a show minutely. *Pouters* and *Carriers*, each with two classes, contended for the first cup, which went to Mr. Yardley's grand Black Carrier cock, a marvellous bird in wattle. We admired the form of the third Dun Carrier cock. Pouters were not specially good. In cocks a Black was first, in hens a Red. *Barbs*, *Tumblers*, *Owls* (English and foreign), and *Turbits* contended for the second cup, which was awarded to an exquisite black-shouldered Turbit, perfect in form and very rich in colour. The English Owls and Turbits were both remarkable classes. In the third group the cup was taken by a very pretty White Jacobin. The *Jacobin* class was generally good. Two neat Reds were equal second, and a Black third. Mr. Serjeantson's *Fantails* were very perfect, especially the first-prize bird; they were large birds. Third was a little Scotch bird with beautiful carriage. *Dragoons* had three classes and a cup between them. The class for Blue or Silvers was an extraordinary one, though the cup was awarded to the first bird in the Red and Yellow class. An Archangel was first in the Variety class, and a Magpie second. The Pigeous were shown singly throughout. From an unfortunate mistake in one of our contemporaries paire were sent in many instances, and of conrse disqualified.

The Show promises to be a leading one, and deserves all support. Hitchin is so easily reached from London that we cannot bnt think there would have been many more visitors but for the intense severity of the weather.

Dorkings (Coloured).—1, F. Parlett, Great Baddow. 2, Rev. E. Bartrum, Berkhampstead. 3, C. Turner, Abbotts Ripton. *hc*, J. Gee, Oxford; J. James, Fen Ditton; Mrs. J. E. Allerton, Leighton Buzzard.

Dorkings (Any other variety).—1 and 3, O. E. Cresswell, Early Wood, Bagshot. 2, L. Wreu, Lowestoft. *hc*, Rev. T. E. Cato, Wye Vicarage. *c*, J. Stiles, jun., Rushton.

Cochin-Chinas (Buff).—1 and 2, Mrs. A. Tindal, Aylesbury. 3, D. Young, Leamington. *hc*, M. Leno, Markyate Street, Dunstable; W. A. Burnell, Southwell; E. Winwood, Worcester.

Cochin-Chinas (Any other variety).—1 and 3, Mrs. A. Tindal. 2, R. S. S. Woodgate, Pembury, Tunbridge Wells. *hc*, T. M. Derry, Gedney; J. K. Fowler, Aylesbury; G. Shrimpton, Leighton Buzzard; Capt. G. L. Talbot, Mapletrense, Edenbridge.

Brahmas (Dark).—Cup, M. Leno. 2 and 3, Horace Lingwood, Creeting, Needham Market. 4, J. Watts, King's Heath, Birmingham. *hc*, Horace Lingwood; R. P. Percival, Northenden; J. K. Fowler.

Brahmas (Light)—Cup, P. Haines, Palgrave, Diss. 2, T. A. Dean, Marden, Hereford. 3, Horace Lingwood. 4, G. Walters, Worcester. *hc*, R. P. Percival; Mrs. F. Cheshire, Acton; Capt. W. Saville, Wye; J. T. Hincks, Humberstone; Mrs. A. Tindal. *c*, H. M. Maynard, Holmwood, Ryde; P. Haines; M. Leno; Capt. W. Saville.

Creve-Cœurs.—Cup, W. Dring, Faversham. 2, W. Cutlack, Littleport. 3, R. B. Wood, Uttoxeter. *hc*, Rev. J. G. B. Knight, Birstwith Vicarage; H. Feast, Swansea.

Houdans.—Cup, W. Dring. 2, R. B. Wood. 3, Mrs. R. K. Vallance, Sittingbourne. *vhc*, W. O. Quihell, Newark. *hc*, W. O. Quibell; W. H. Copplestone, Lostwithiel (2)

Game (Black-breasted and other Reds).—Cup, S. Mathew, Stowmarket. 2, W. J. Pope, Biggleswade. 3, H. E. Martin, Sculthorpe. *hc*, C. Heafrey, Mappleback; H. E. Martin; F. Sales, Crowle; Miss S. M. Osborn, Yarnton; W. Foster, Desl. *c*, V. Sandford.

Game (Duckwing and Pile).—Cup, E. Winwood. 2, G. H. Fitzherbert, Sevenoaks. 3, S. Mathew. *hc*, F. Sales; D. W. J. Thomas, Brecon; J. Mason, Worcester; G. Mann, Cambridge.

Spanish.—1, P. F. Le Seuer, Grand Vaux, Jersey. 2, D. M. Mills, Newport Pagnell. 3 and *hc*, R. Wright, Holloway Road, London.

Hamburghs (Gold-spangled).—1, T. Blakeman, Tettenhall, Wolverhampton. 2, H. Beldon, Goitstock, Bingley. 3, S. W. Hallam, Whitwick. *hc*, W. W. Tickner, Ipswich.

Hamburghs (Silver-spangled).—1, H. Beldon. 2, J. Robinson, Garstang. 3, Mrs. T. Ponsonby, Goldingtonbury. *hc*, J. Ackerman, Whitby; S. W. Hallam; Ashton & Boeth, Broadbottom, Mottram.

Hamburghs (Gold-pencilled).—1, O. E. Cresswell. 2, J. Robinson. 3, W. W. Tickner. *hc*, J. Smith, Sincill Banks; S. W. Hallam; H. Beldon (2).

Hamburghs (Silver-pencilled).—1 and 2, H. Beldon. 3, J. Robinson. *hc*, B. Norton, Town Malling.

Hamburghs (Black).—1 and 2, Rev. W. Serjeantson, Acton Burnell Rectory. 3 and *hc*, H. Beldon.

Any other Variety.—1 and 2, H. Beldon. 3, R. B Day, Rickmansworth. Rev. N. J. Ridley, Newbury; Mrs. A. Tindal.

Local Class.—1, G. Shrimpton (Partridge Cochins). 2, Mrs. E. Pryor, Welwyn (Partridge Cochins). 3, S. Lucas, Hitchin (Light Brahmas). *vhc*, Mrs. J. E. Allerton (White Cochin). *hc*, W. W. Maynard (Dark Brahmas); Rev. J. Richardson, Sandy Rectory (Dark Brahmas); A. Bentley, Rickmansworth; W. Foot, Hitchin (Dorkings). *c*, G. B. Breeze, Easney (Light Brahmas); E. Lantour, Hexton (Dark Brahmas); E. S. Fordham, Ashwell Bury (Houdans); R. B. Day (Creve-Cœurs); T. Woodbridge, Luton (Black Red Game); C. S. Marsh, Little Offley, Hitchin (Gold-laced Bantams); W. Sander, Dunstable (Light Brahmas).

Selling Class (Brahmas, Dorkings, French, and Cochins).—1, P. Passmore, Northampton. 2, D. Young (Buff Cochin). 3, R. Cheesman, Westwell (Coloured Dorkings). *vhc*, R. Coney, Alford (Houdans). *hc*, S. Lucas (Light Brahmas); Rev. J. Richardson (Dark Brahmas); A. Ransom, Hitchin (Creve-Cœurs); M. Leno; G. Shrimpton (Cochins); Mrs. J. E. Allerton (Cochin). *c*, S. Lucas (Light Brahmas); Mrs. E. Pryor (Buff Cochins); W. Morris, Ross (Buff Cochins); M. Leno (Brahmas); A. Ransom (Creve-Cœurs); J. K. Fowler, Aylesbury (Cochins); G. Oakley, Luton (Partridge Cochins); Mrs. J. E. Allerton (Cochin).

Selling Class (Any other variety).—1, D. W. J. Thomas (Black Red Game). 2, W. Boutcher, Notting Hill, London (Game Bantams). 3, Mrs. Newton, Epworth (Gold-pencilled Hamburghs). *hc*, S. Lucas (Booted Bantams); S. W. Freemantle, Gosberton (Silver-spangled Hamburghs); F. Sales (Game); J. K. Fowler (White Leghorns). *c*, Capt. Wetherall, Loddington (Black Red Bantams); D. M. Mills (Black Spanish); S. Field, Ambrosden (Game); H. Powers, Biggleswade (Gold-pencilled Hamburghs).

Bantams (Black and other Red Game).—1, W. Boutcher. 2, T. Randall, jun., Guildford. 3, Capt. Wetherall. *hc*, Capt. Wetherall; N. Hill, Ealing; V. Sandford; G. Lucas.

Bantams (Black or White, Rose-combed).—1, H. Beldon. 2, Mrs. A. Tindal. 3, G. P. Ladd, Canterbury. *hc*, C. Reed, Cambridge.

Bantams (Any other variety except Game).—1, E. Pritchard, Tettenhall, Wolverhampton. 2, M. Leno. 3, R. S. S. Woodgate. *hc*, M. Leno; Mrs. T. Wootten, Mapperley (2); J. Rouse, Southall.

Bantams (Duckwing and Pile).—1, W. Goodbody, Ely. 2, R. Brownlie, Townsend, Kirkcaldy. 3, E. W. Southwood, Fakenham.

Ducks (Aylesbury).—1 and Cup, Mrs. A. Tindal. 2, J. K. Fowler. 3, Miss M. E. Campaio, Deeping, Spalding. *hc*, J. K. Fowler; S. Turner, Arlesey.

Ducks (Rouen).—1, J. Gee. 2, F. Parlett. 3, Mrs. A. Tindal. *hc*, W. W. Maynard; J. K. Fowler.

Ducks (Black East Indian).—1, G. S. Sainsbury, Devizes. 2, Rev. J. Richardson. 3, J. J. Malden, Biggleswade. *hc*, J. W. Kellaway; S. Burn, Whitby; G. S. Sainsbury.

Ducks (Any other variety).—1 and 2, W. Boutcher (Mandarins and Carolina). Extra 2, M. Leno. 3, J. K. Fowler (Cayugas). *hc*, M. Leno; Capt. G. F. Talbot (Muscovy).

PIGEONS.

Pouters.—*Cock.*—1, J. Hairsine, Hull. 2, W. Nottage, Northampton. 3, Mrs. J. E. Allerton. *Hen.*—1, W. Nottage. 2, J. Stiles, jun. 3, J. E. Palmer, Peterborough.

Carriers.—*Cock.*—1 and Cup, H. Yardley. 2 and 3, H. M. Maynard. *vhc*, E. Walker, Leicester. *hc*, R. Payze, jun. *c*, J. C Ord, Lupus Street, Pimlico. *Hen.*—1, H. Yardley. 2, J. C. Ord. 3, E. Walker. *vhc*, T. Chambers, Northampton. *hc*, H. M. Maynard. *c*, J. E. Palmer.

Barbs.—1, H. M. Maynard. 2, H. Yardley, Birmingham. 3, H. B. Massey, Spalding.

Tumblers.—1, H. Yardley. 2 and *hc*, J. Ford, Monkwell Street, London. 3, G. Holloway, jun., Stroud.

Owls.—*English.*—1, T. G. Sprunt. 2, A. T. Barnes, Gloucester. 3, E. W. Vausendeu, Gold Hawk Road, London. *vhc*, J. Watts. *hc*, T. G. Sprunt, Boundary Road, London. *c*, L. Allen, London Road, Southwark. *Foreign.*—1 and *hc*, L. Allen. 2, J. J. Sparrow, Grosvenor Mews, London. 3, T. Chambers.

Turbits.—1 and Cup, O. E. Cresswell. 2 and 3, G. Hardy, Gold Hawk Road, London. *vhc*, *hc*, and *c*, S. Salter, Egrove.

Antwerps—*Short-faced.*—1, A. Carruthers. *Long-faced.*—1, W. Tomlin, Oxford. 2 and *c*, W. R. Pratt, Oxford. 3, W. B. Tegetmeier, Finchley, London. *hc*, F. Lubbock, Northaw (2); F. E. Skelton, Tooting.

Jacobins.—1, Cup, and *c*, G. Hardy. Equal 2, L. Allen; O. E. Cresswell. 3, H. W. Webb, Lower Sydenham. *vhc*, L. Allen.

Fantails.—1 and 2, Rev. W. Serjeantson. 3, O. E. Cresswell. *hc*, J. F. Loversidge, Newark (2). *c*, H. M. Maynard.

Any other Variety.—1, 2, and *vhc*, G. Hardy (Archangels, Magpies, and Swallows). 3, S. Salter (Runt). Extra 3 and *hc*, L. Allen (red Priest and Mane). *c*, W. B. Tegetmeier (Pigmy Pouters) (2).

Dragoons.—*Blue or Silver.*—1, W. Bishop, Dorchester. 2, W. Smith, Walton, Liverpool. 3, W. B. Tegetmeier. *vhc*, R. Woods; W. Bishop. *hc*, E. J. Rowley, Burslem; R. Woods, Mansfield; W. B. Tegetmeier; W. Bishop; F. Graham; W. Hill, Manchester. *c*, R. Woods; W. B. Tegetmeier; W. Hill.

Dragoons.—*Red or Yellow.*—1 and Cup, W. Hill. 2 and 3, F. Graham. *vhc*, R. Woods (2). *hc*, J. Watts; S. Salter. *c*, R. Wood; F. Graham,

Dragoons.—*White.*—1 and *vhc*, W. Bishop. 2, A. A. Vander Meersch, Tooting. 3, R. Woods. *hc*, W. Bishop; T. Crisp, Southall. *c*, D. Young.

Local Class.—1 and 2, W. Larkins, Henlow. 3, Rev. C. C. Ewbank, Langford (Pouter). *hc*, G. Lucas, Hitchin (Tumbler); A. Bentley (Carrier); W. Foot (Carrier); A. Carruthers (White African Owl). *c*, A. Bentley (Dragoon).

Selling Class.—1, W. Larkins (Carrier). 2, W. R. Pratt (Dragoon). 3, S. Salter (Carrier). *vhc*, J. E. Palmer (Carrier); J. Ford. *hc*, A. Carruthers (Yellow Barb); W. Nottage (Pouter); J. Watts; S. Salter (Carrier). *c*, Rev. C. Ewbank (Pouter); W. Gamon (Dragoon) (2); J. Ford.

Judges.—*Poultry:* Mr. W. H. Nichols. *Pigeons:* Mr. P. H. Jones, and Mr. F. Gresham.

MIDDLESBOROUGH PIGEON SHOW.

This was held in the Odd-Fellows Hall on the 29th and 30th of December. The following is a list of the awards:—

Pouters—*Red or Yellow.*—*Cocks.*—1, A. Shaw, Middlesborough. 2, T. Wood. *hc*, E. Horner, Harewood, Leeds. *c*, E. Beckwith, Monkwearmouth. *Hens.*—1, R. Blacklock, Sunderland. 2, E. Horner. *hc*, J. Hairsine, Hull.

Pouters.—*Blue.*—*Cocks.*—1, E. Beckwith. 2, E. Horner. *vhc*, J. P. Fawcett, Flowergate, Whitby. *Hens.*—1, E. Beckwith. 2, J. Harrison, York. *hc*, E. Horner.

Pouters.—*Any other colour*—*Cocks.*—1, H. Severs, Middlesborough. 2, R. Blacklock. *vhc*, G. H. Lambert, Whitby. *Hens.*—1, E. Horner. 2, G. Destner, Driffield. *vhc*, H. Severs. *hc*, H. Mapplebeck, Birmingham.

Carriers.—*Black.*—*Cocks.*—1, T. H. Stretch, Ormskirk. 2, E. Horner. *hc*, E. Beckwith; E. Horner. *Hens.*—1 and 2, E. Horner. *hc*, H. Yardley, Market Hall, Birmingham.

Carriers.—*Any other colour.*—*Cocks.*—1, E. Horner. 2, H. Yardley. *Hens.*—1, E. Horner. 2 and *vhc*, E. Beckwith. *c*, H. Severs; H. Yardley.

Tumblers.—*Short-faced Almond.*—*Cock or Hen.*—1, E. Beckwith. 2, H. Yardley. *vhc*, E. Horner.

Tumblers.—*Short-faced any other colour.*—*Cock or Hen.*—1, *vhc*, and *hc*, E. Beckwith. 2, H. Yardley.

Tumblers.—*Long-faced, any colour.*—*Cock or Hen.*—1 and *hc*, E. Beckwith 2, T. C. Taylor, Middlesborough. *c*, E. Horner.

Owls.—*English.*—*Cock or Hen.*—1, J. Young, Bishop Auckland. 2, A. Mackenzie, Liverpool. *vhc*, W. B. Miller, Walsall. *hc*, J. Richmond, Oswaldwistle. *c*, G. Alderson, West Hartlepool. *Foreign.*—*Cock or Hen.*—1, S. Lawson, Preston. 2, J. J. Stott, Preston. *vhc*, J. J. Sparrow, Grosvenor Mews, London. *hc*, G. Alderson. *c*, E. Horner.

Turbits.—*Red or Yellow.*—*Cock or Hen.*—1, T. S. Stephenson, Newbegin, Beverley. 2, E. Horner. *vhc*, H. Mappleheck. *c*, E. A. Thornton, Hull. *Any other colour.*—*Cock or Hen.*—1, W. Moore, Pickering. 2, G. Alderson. *vhc*, J. Young. *hc*, E. A. Thornton.

Trumpeters.—*Cock or Hen.*—1, J. Lederer. 2, E. Horner. *hc*, H. A. Ayrton, Saltburn.

Dragoons.—*Cock or Hen.*—1, A. Boote. 2, R. Woods. *vhc*, A. Boote, Crewe; J. G. Dunn, Ryton-on-Tyne. *hc*, R. Woods, Mansfield; W. Smith, Liverpool.

Barbs.—*Black.*—*Cock or Hen.*—1 and *vhc*, E. Horner. 2 and *hc*, E. Beckwith. *Any other colour.*—*Cock or Hen.*—1, E. Beckwith. 2, W. Bulmer, Stockton-on-Tees. *vhc*, H. Yardley.

Fantails.—*Cock or Hen.*—1 and *hc*, E. Beckwith. 2, J. F. Loversidge, Newark. *vhc*, E. Horner.

Jacobins.—*Red or Yellow.*—*Cock or Hen.*—1, J. Smith, Walkley, Sheffield. 2, W. Stirling, Queenstown. *vhc*, J. Aconley, Pickering. *hc*, J. Thompson, Middlesborough; S. Lawson; T. C. Taylor.

Nuns.—*Cock or Hen.*—1 and 2, E. Horner. *hc*, W. Bulmer. *c*, J. Young.

Magpies.—*Cock or Hen.*—1, J. Richmond. 2, M. Ord, Sedgfield, Durham. *hc*, E. Beckwith; R. H. Scott, York; E. Horner.

Antwerps.—*Short-faced.*—*Cock or Hen.*—1, J. Watts, King's Heath, Birmingham. 2, J. Smith. *vhc*, J. J. Stott. *hc*, W. Ellia, Idle, Leeds. *Long-faced.*—*Cock or Hen.*—1, R. Blacklock. 2, E. Horner. *hc*, W. Ellia. *c*, J. J. Sparrow.

Any other Variety.—*Cock or Hen.*—1, H. Mappleheck. 2, J. Richmond. *vhc*, M. Ord.

Selling Class.—*Price not to exceed £2.*—*Cocks or Hens.*—1, J. Young. 2, J. R. Torbock, Middlesborough. *vhc*, H. A. Ayrton. *hc*, J. R. Torbock. *Price not to exceed £1.*—*Cocks or Hens.*—1 and *vhc*, J. R. Torbock. 2, F. Hodgson, *c*, E. Beckwith; J. Watts.

BIRMINGHAM COLUMBARIAN SOCIETY'S EXHIBITION.

This was held in the Athenæum Rooms, Temple Street, Birmingham, on December 31st, 1874. There were fifty-six exhibitors and 559 pens.

YOUNG SINGLE BIRDS, EITHER SEX.

Carriers.—*Black.*—Cup and 3, H. Hallam, Birmingham. 1, G. Gordin, Birmingham. 2, T. Hallam. *hc*, G. E. Sawdon, Leede; F. Smith, Selly Oak; H. Allsopp, Birmingham; G. F. Whitehouse, King's Heath; Capt. De Winton, Hereford; T. Hallam, Birmingham. *Dun.*—1, A. Billyeald, Nottingham. 2 and 3, Capt. De Winton. *hc*, W. Cartwright, Birmingham; E. T. Dew, Weston-super-Mare; G. Gordin. *Any other colour.*—1, E. T. Dew. 2 and 3, J. Watts, King's Heath, Birmingham.

Pouters.—*Blue.*—1, H. Pratt, Hampton-in-Arden. Cup and 2, G. Holloway, jun., Strond. 3, J. Guthrie, Hexham. *hc*, R. Barratt, Stroud; G. Holloway, jun. *Black.*—1, H. Pratt. *Red.*—1, 2, and 3, H. Pratt. *Yellow.*—Cup, 1, 2, and 3, H. Pratt *White.*—Cup, 1, and 2, H. Pratt. 3, H. Simpson. *c*, H. Simpson, Spalding; J. E. Spence, Bronghty Ferry.

Tumblers.—*Almond.*—1 and 2, T. Hallam. 3, R. Barratt. *Mufed.*—Cup, 1, and 3, E. D. Careless. 2, F. Bowker, Edgbaston. *hc*, J. Watts. *c*, E. D. Careless (2).

Tumblers.—*Short-faced.*—*Baldheads.*—1 and 2, W. Woodhouse, King's Lynn. *Beards.*—1, W. Woodhouse. *Any other.*—1, T. Hallam. 2 and 3, E. D. Careless. *c*, J. Watts (2); T. Hallam.

Tumblers.—*Long-faced.*—*Clean-legged.*—1 and 2, J. M. Bott, Acocks Green, 3, J. Watts. *c*, E. D. Careless; J. Guthrie. *Balds or Beards.*—Cup, 1, and 2, J. Watts. 3, W. Ridley, Hexham.

Jacobins.—*Red or Yellow.*—Cup, 1, 2, and 3, W. Woodhouse. *c*, W. T. Breeden, King's Heath (2). *Any other colour.*—Cup, 1, 2, and 3, A. A. Yander Meersch, Tooting, London, S.W.

Fantails.—Cup, 1, and 2, J. E. Spence. 3, J. F. Loversidge, Newark-on-Trent. *hc*, J. F. Loversidge; H. Simpson; F. A. Seale, Dublin (2).

Turbits.—*Red or Yellow.*—Cup, 1, and 2, W. E. Easten, Hull. 3, A. Riddell, Lichfield. *Any other colour.*—Cup and 1, W. Ridley. 2 and 3, E. T. Dew. *c*, R. W. Richardson, Beverley; E. T. Dew.

Trumpeters.—1, A. A. Vander Meersch.

Barbs.—Cup, 1, and 3, F. Smith. 2, R. W. Richardson.

Archangels.—1, G. E. Sawdon.

Nuns.—Cup, 1, and 2, A. A. Vander Meersch. 3, J. Watts. *c*, G. Packham, Exeter.

Owls.—*English.*—Cup and 1, G. E. Sawdon. 2, W. Ridley. 3 and *hc*, J. W. Ludlow, Birmingham. *c*, W. Ridley; G. E. Sawdon. *Foreign.*—2, G. Holloway, jun.

Dragoons.—*Blue.*—Cup and 1, F. Graham. 2, W. Smith. 3, W. Gamon, Chester. *hc*, G. Packham; W. Smith; W. Gamon. *c*, J. Watts. *Silver.*—1, W. Gamon. 2, J. Guthrie. 3 and *hc*, F. Graham. *Yellow and Red.*—Cup and 1, G. F. Whitehouse. 2 and 3, F. Graham. *hc*, J. Watts. *c*, R. W. Richardson. *White.*—1 and *c*, F. Graham. 2, G. Packham. 3, G. F. Whitehouse. *Any other colour.*—Cup, 1, and 2, J. G. Dunn. 3, F. Graham.

Antwerps.—*Dun.*—Cup and 1, J. W. Ludlow. 2, W. Gamon. 3, H. Gough, Wolverhampton. *hc*, W. Gamon; T. Clolee; J. Forrest. *c*, S. Foster, Birmingham; T. Clolee, Birmingham; C. F. Copeman, Solihull; J. Forrest; J. W. Ludlow. *Blue.*—Cup and 1, H. Gough. 2, J. Wilkinson, Birmingham. 3, J. W. Ludlow. *c*, J. Wilkinson; J. W. Ludlow; H. Gough.

Antwerps.—*Blue-chequered.*—Cup, 1, 2, and 3, J. W. Ludlow. *c*, C. F. Copeman; G. Phelps, Handsworth; J. W. Ludlow. *Red-chequered.*—Cup and 1, S. Foster. 2 and 3, W. Gamon. *c*, E. Thompson, Selly Oak; W. Gamon.

Magpies.—Cup, 1, and 2, J. Watts. 3, J. W. Ludlow.

Swallows.—1 and *c*, J. W. Ludlow. 2 and 3, J. Watts.

Any other Variety.—Cup, 1, 2, and 3, J. W. Ludlow. *c*, J. Watts; G. Holloway, jun.; G. Packham; J. W. Ludlow; J. Wilkinson.

BIRDS OF ANY AGE.

Carriers.—*Black.*—*Cocks.*—Cup and 1, H. Allsop. 2, G. F. Whitehouse. 3, W. Cartwright. *hc*, F. Smith; J. James; G. F. Whitehouse; R. Barrett; T. Hallam; P. R. Spencer, Hereford. *Hens.*—1, G. F. Whitehouse. 2, H. Allsop. 3, G. Gordin. *hc*, P. R. Spencer; T. Hallam; H. Hallam.

Carriers.—*Dun.*—*Cocks.*—1, G. F. Whitehouse. 2, E. Booth, Birmingham. 3, J. James. *hc*, E. T. Dew. *Hens.*—1, H. Hallam. 2, G. Gordin. 3, H. Allsop. *hc*, G. Packham.

Carriers.—*Any other colour.*—*Cock.*—1, E. T. Dew. 2, J. Watts. *Hens.*—1, E. T. Dew. 2, J. Watts.

Pouters.—*White.*—*Cocks.*—1, H. Pratt. 2, G. Crookes, Owlerton. 3, P. R. Spencer. *hc*, R. Barratt. *Hens.*—1 and 2, H. Pratt. 3, R. Barratt.

Pouters.—*Any other colour.*—*Cocks.*—Cup, 1, 2, and 3, H. Pratt. *c*, G. Crookes. R. Barratt; H. Pratt. *Hens.*—1 and 2, H. Pratt. 3, R. Barratt.

Tumblers.—*Almond*—Cup, 1, Extra, and 2, T. Hallam. *Short-faced.*—1 and 2, T. Hallam. 3, R. Barratt.

Tumblers.—*Long-mufed.*—1 and 3, F. Bowker. 2, W. T. Breeden. *c*, G. Phelps. *Clean-legged Long-faced.*—1 and 3, J. M. Bott. 2, J. Watts.

Barbs.—1, F. Smith. 2, G. E. Sawdon.

Owls.—*English.*—1, J. W. Ludlow. 2 and 3, G. E. Sawdon.

Fantails.—1 and 2, E. A. Seale. 3, P. R. Spencer. *c*, E. A. Seale; J. F. Loversidge; P. R. Spencer.

Jacobins.—1, W. T. Breeden. 2 and 3, A. A. Yander Meersch. *c*, W. E. Easten; E. A. Seale.

Turbits.—1 and 2, E. A. Seale. 3 and *c*, E. T. Dew.

Nuns.—1, E. A. Seale. 2, G. Crookes. 3, W. E. Easten.

Magpies.—1, E. A. Seale. 2, J. Watts.

Trumpeters.—1 and 2, A. A. Yander Meersch. 3, G. Packham.

Dragoons.—*Blue.*—1, J. Watts. 2, F. Graham. 3, G. F. Whitehouse. *c*, S. Foster. *Silver.*—1, F. Graham. 2, H. Allsop. *Yellow or Red.*—Cup and 1, F. Graham. 2, G. F. Whitehouse. *White.*—1, G. F. Whitehouse. 2, F. Graham. 3, J. Watts. *c*, J. James. Birmingham.

Antwerps.—*Dun.*—1 and 2, H. Gough. 3, W. Gamon. *c*, J. Forrest, Birmingham; J. W. Ludlow. *Blue*,—1, W. Gamon. 2, H. Gough. 3, J. W. Ludlow. *c*, C. F. Copeman. *Blue-chequered* —1, W. Gamon. 2 and 3, J. W. Ludlow. *c*, J. W. Ludlow; C. F. Copeman. *Red chequered.*—1, W. Gamon.

Antwerps.—*Cocks.*—1, W. Gamon. Cup and 2, J. W. Ludlow. 3, J. Wilkinson. *c*, G. Phelps; J. W. Ludlow; J. Watts; W. Gamon; H. Gough; T. Clulee.

Any other Variety.—*Pairs.*—Cup, 1, 3, and *c*, J. W. Ludlow. 2, J. Watts.

Any other Variety—*Single.*—1, 2, 3, and *c*, J. W. Ludlow.

Any other Variety.—*Single.*—1, F. Smith. 2, E. D. Careless. 3, J. Watts. *c*, E. D. Careless; J. W. Ludlow.

Judge.—Mr. T. J. Charlton, Bradford, Yorks.

MANCHESTER BIRD SHOW.

The second annual Exhibition took place in the Cotton Waste Exchange, Manchester, on December 31st, and January 1st and 2nd. The Show on the whole was a successful one, to judge of the 450 entries effected. Two exhibitors or firms alone entered fifty-one birds each—namely, Messrs. G. & J. Mackley of Nantwich, and Messrs. Evans (Secretary), and Smethurst of Manchester. The Society's gold medal fell to the lot of the Norwich firm for twenty-eight points, the Manchester firm thus losing by one point. The judging could not be got through the first day, only the first half-dozen classes having been completed—namely, the Lancashire birds, so styled by some recently, but better known for years past as Manchester Coppys and Plainheads. The postponement of the judging was caused through a dense fog, "which hung like a pall" over the city during Thursday. Certainly this was a very great disappointment. Throughout the entire classes many excellent birds were exhibited.

Clear Yellow.—*Lancashire Coppy.*—1, Evans & Smethurst, Manchester. 2 and *vhc*, J. Fielding, Rochdale. 3 and *hc*, J. Shackleton, Rochdale. *c*, R. Wood, Oldham. *Lancashire Plain-head.*—1 and 2, J. Fielding. 3, Evans and Smethurst. *vhc*, J. Meakin, Manchester; Evans & Smethurst. *hc*, R. Wood. *c*, Hamer & Bardsley, Oldham.

Clear Buff.—*Lancashire Coppy.*—1 and 2, J. Fielding. 3, B. Harrison, Oldham. *vhc*, J. Shackleton. *hc*, Hamer & Bardsley. *c*, Evans & Smethurst. *Lancashire Plain-head.*—1, J. Fielding. 2, B. Harrison. 3, Evans & Smethurst. *vhc*, W. Bowyer, Leek. *hc*, Hamer & Bardsley. *c*, J. Fielding; R. Wood.

Buff or Yellow-marked.—*Lancashire Coppy.*—1 and 2, J. Fielding. 3, G. and J. Mackley, Norwich. *vhc*, J. Meakin. *hc*, J. Shackleton. *c*, Evans and Smethurst. *Lancashire Plain-head.*—1, J. Shackleton. 2, W. Bowyer. 3, Hamer & Bardsley. *vhc*, R. Wood. *hc*, J. Fielding. *c*, J. Thackrey, Bradford.

Norwich.—*Clear Yellow.*—1 and 3, Athersuch & Son, Coventry. 2, Orme and Ashley, Derby. *vhc* and *hc*, J. Adams, Coventry. *Clear Buff.*—1, W. Pratt, Leicester. 2, 3, *vhc*, J. Adams. *hc*, Athersuch & Son. *c*, Athersuch & Son; Moore & Wynne, Northampton.

Norwich.—*Evenly-marked or Variegated Yellow.*—1, 2, and *vhc*, G. & J. Mackley. 3, Moore & Wynne. *hc* and *c*, J. Adams. *Evenly-marked or Variegated Buff.*—1 and *hc*, Athersuch & Son. 2 and 3, J. Adams. *vhc*, Athersuch & Son; J. Adams. *c*, G. & J. Mackley.

Norwich.—*Marked Crested Yellow.*—1 and 3, F. Woodward, Derby. 2, *vhc*, and *c*, G. & J. Mackley. *hc*, W. B. Hovell, Norwich. *Marked Crested Buff.*—1 and 3, F. Woodward. 2, R. Hawman, Middlesborough. *vhc*, G. Cox, Northampton; G. & J. Mackley. *hc* and *c*, W. B. Hovell.

Belgian.—*Clear Yellow.*—1, T. Barnett, Stockport. 2, Hamer & Bardsley. 3 and *c*, G. E. Russell, Brierley Hill. *vhc*, W. Grantham, Hull. *hc*, J. Hart. *Clear Buff.*—1, T. Barnett. 2 and *hc*, G. E. Russell. 3, Hamer & Bardsley. *vhc*, J. Hart.

Lizard.—*Golden-spangled.*—1 and 2, Hamer & Bardsley. 3, S. Bunting, Derby. *vhc*, B. Harrison. *hc*, J. Athersuch & Son. *c*, Holdsworth & Oliver, Harrogate. *Silver-spangled.*—1, J. Shackleton. 2 and 3, Hamer & Bardsley. *vhc*, B. Harrison; S. Bunting. *hc*, S. Bunting. *c*, Evans & Smethurst.

Lizards.—*Cage of Six Golden and Silver-spangled, even or broken-capped.*—2, Hamer & Bardsley. 3 and *vhc*, Evans & Smethurst.

Yorkshire.—*Clear Yellow.*—1, Hamer & Bardsley. 2 and *c*, Evans and Smethurst. 3, L. Botterworth, Balderstone, Rochdale. *vhc*, G. & J. Mackley. *hc*, Holdsworth & Oliver. *Clear Buff.*—1, Hamer & Bardsley. 2, J. Thackrey. 3, G. & J. Mackley. *hc* and *c*, Evans & Smethurst.

Yorkshire.—*Evenly-marked Yellow.*—1 and 3, Hamer & Bardsley. 2, J. Fielding. *vhc*, J. Thackrey. *hc*, Evans & Smethurst. *Evenly-marked Buff.*—1 and *hc*, Hamer & Bardsley. 2 and *vhc*, J. Thackrey. 3, J. Fielding. *c*, R. Hawman.

Cinnamon.—*Yellow.*—1, 2, and 3, J. Adams. *vhc*, G. Cox. *hc*, W. Carroll, Northampton. *c*, A. Palmer, Norwich. *Buff.*—1, 2, and 3, J. Adams. *hc*, W. Carroll. *c*, Moore & Wynne.

Any other Variety of Canary.—1, J. Athersuch & Son. 2, G. E. Russell. 3, G. & J. Mackley (Dark-crested Buff Norwich). *vhc*, G. Cox; W. B. Hovell (Buff Silver-crested Norwich). *c*, J. Hart.

Selling Class.—1 and *c*, G. & J. Mackley. 2, J. Thackrey. 3, S. Bunting (Mule). *vhc*, J. Shackleton (Lancashire Plain-head); J. Athersuch & Son. *hc*, W. Richards, Bulwell (Lizard); J. Spence, South Shields (Buff Grey Mule); G. Cox.

MULES.

Goldfinch and Canary.—*Clear or Ticked Yellow or Buff.*—1, G. & J. Mackley. 2, S. Bunting. 3, Evans & Smethurst. *Dark.*—1, G. Cox. 2, Moore and Wynne. 3, R. Hawman. *vhc*, S. Bunting. *hc*, G. & J. Mackley.

Goldfinch and Canary or Linnet and Canary.—*Unevenly-marked.*—1, Evans & Smethurst. 2, J. Moore, Boston. 3, S. Bunting. *vhc*, W. Grantham. *c*, J. Fielding.

Linnet and Canary.—1 and 3, J. Spence. 2 and *vhc*, Evans & Smethurst. *hc*, Brown & Gorton, Northampton.

Any other Variety.—1 and 3, Evans & Smethurst (Bullfinch, Goldfinch, and Grey). 2 and *c*, G. & J. Mackley (Linnet, Siskin, and Canary). *vhc*, Evans and Smethurst (Bullfinch and Goldfinch); G. & J. Mackley (Linnet).

BRITISH BIRDS.

Goldfinch.—*House-moulted.*—1, G. Cox. 2, S. Bunting. 3, R. Hawman. *vhc*, Evans & Smethurst. *hc*, J. C. Bamber, Preston. *c*, J. Meakin.

Linnet.—*House-moulted Brown.*—1, R. Hawman. 2, S. Bunting. 3, Simnet and Ward, Derby. *vhc*, Evans & Smethurst. *hc*, J. Page.

Skylark.—*House-moulted.*—1, 2, and 3, Evans & Smethurst. *vhc*, J. Fielding. *hc*, J. Royle, Prestwich.

Any other Variety.—1, 2, and 3, G. & J. Mackley (Song Thrush, Bullfinch

and Blackbird). *vhc*, Evans & Smethurst. *hc*, O. A. Watts, Brixton, S.W. (Black Cap). *c*, J. C. Bamber.

FOREIGN BIRDS.

ANY VARIETY.—1, S. Bunting (King Parrot). 2 and *vhc*, G. & J. Mackley (Botta-Botta and Parroquet). 3, J. Mills, Rochdale.

The Society's Gold Medal was won by Messrs. G. & J. Mackley, of Norwich. Mr. J. Fielding, Rochdale, won Mrs. Meakin's Silver Cup for most points in Lancashire Coppy Classes.

KIRKCALDY POULTRY SHOW.

THE above old-established Exhibition held its annual Show on Monday and Tuesday, the 4th and 5th of January, and was as usual well got up and managed. There was a large entry of stock in every department, and the quality was first-rate in many instances.

Game take the lead here both in the prize list and in actual numbers, and the catalogue will show that almost all the leading spirits of the variety in Scotland, and not a few from England, attended. The birds which struck us most were the second and third Black Red cocks, both of which we considered better than the first, the second-prize Black Red hen, and a fine Duckwing cock which stood first in his class. The Duckwings are always well represented at Kirkcaldy, and the quality good; while in *Spanish* the winners were very good, and Mr. Teebay was not the person to err in that class. *Cochins* were few in number, though what was of them was good. *Brahma* cocks brought out a grand bird of Mr. Raines', the best we have seen this season. We have seen *Hamburghs* much more numerous at this Show. Pencilled hens were best. The first-prize birds were well matched and pencilled. The second not so good in comb. We liked a pen of pullets shown by Mr. Lockhart in this class about as well as any. The Variety class, first went to good Crêves, second Houdans. *Bantams* were not so numerous as usual, for which we suspect the fortunate owner of the lot of little Piles, which have done so much execution this season, is accountable. However, what was there was first-rate, and while the Pile cocks were all good, one of the hens in the first-prize pen was, as a hen, better.

Pigeons were in greater numbers than for some years, and a good lot of Pouters were shown, the best bird in the whole lot being the third-prize White cock. Carriers were, with a few notable exceptions, of no great quality. Fantails were all good, and Tumblers the same. There were a good few Jacobins of fair quality, Turbits and Owls the same; while first in the Variety class were good Dun Barbs, very middling Black second.

Canaries were in great force as regards numbers, and the quality we were told, as we know nothing of them, first-rate.

The Committee was very unfortunate in the weather, still a good number of visitors turned out to this well-conducted and agreeable Exhibition. Mr. Teebay judged the poultry, and Mr. A. Frame, Larkhall, the Pigeons, and their awards were generally well received.

GAME (Black Red).—*Cock.*—1, W. Beveridge, Kirkcaldy. 2, J. Mason, Worcester. 3, J. H. Herriot, Kirkcaldy. *hc*, J. Beveridge; J. Allan, Dunfermline; J. Wishart, Kirkcaldy; J. Nicoll, Forfar. *Hen.*—1, J. Nicholl. 2, R. Stewart. 3, J. Mason. *hc*, A. Watson, Kirkcaldy; D. Harley; C. Jamieson; J. Wishart (2); J. A. Mather (2); Boath & Tosh.

GAME (Brown Red).—*Cock.*—1, D. Harley. 2, J. Brough. 3, R. Stewart. Local Cup and *vhc*, W. Webster. *hc*, P. Speedie; H. W. Hutchison. *c*, H. L. Horne. *Hen.*—1, R. Stewart. 2 and Local Cup, W. Webster. 3 and *c*, D. Harley.

GAME (Any other colour).—*Cock.*—1, J. A. Mather. 2, D. Harley. 3, S. Young. *c*, S. Young. *Hen.*—1, C. Jarvis. 2, J. Lyall. 3, R. Stewart. *hc*, A. Watson.

DORKINGS (Silver).—*Cock.*—1, D. Annan. 2, W. Hughson. 3, T. Raines. *hc*, R. Blyth; D. Annan. *Hens.*—1, W. Hughson. 2 and 3, D. Annan. *hc* T. Raines.

DORKINGS (Dark).—*Cock.*—1, T. Raines. 2, J. Turnbull. 3, D. Annan. *hc*, R. Lockhart; D. Gellatly. *Hens.*—1, G. S. Robb. 2, T. Raines. 3, D. Gellatly. *hc*, G. S. Robb; R. Lockhart. *c*, R. Blyth.

COCHIN-CHINAS.—*Cock.*—1, Mrs. W. Steven. 2, W. J. Paton. 3, R. Blyth. *Hens.*—1, W. J. Paton. 2, R. Blyth. 3, Earl of Rosslyn.

BRAHMA POOTRAS.—*Cock.*—1 and 2, T. Raines. 3, A. M'Donald. *hc*, R. Blyth; W. Henderson. *Hens.*—1, Miss G. Morison. 2 and 3, T. Raines. *hc* H. Brownlie; Miss G. Morison; Mrs. W. Stephen, Montrose; J. A. Dempster, Stirling.

SPANISH.—*Cock.*—1 and 3, W. Hughson. 2, A. Grieve. *c*, A. Ridpath. *Hens.*—1, A. Somerville. 2, W. Hughson. 3, A. Ridpath, Edinburgh. *hc*, R. Blyth, Kingskettle.

HAMBURGHS (Pencilled).—*Cock.*—1, D. Cheyne. 2, R. Dickson. 3, A. Pratt. *hc*, W. Cook; R. Paton; R. Thomson; H. Russell; J. Lockhart. *Hens.*—1, R. Dickson. 2, A. Pratt, Kirkcaldy. 3, T. Hanson. *hc*, R. Paton; J. Lockhart, Newburgh.

HAMBURGHS (Spangled).—*Cock.*—1, J. Pollock. 2, W. R. Park. 3, G. Stalker. *hc*, J. Morrison; Mrs. W. Keddie; J. Stewart; J. M'Andrew. *Hens.*—1, J. Stewart. 2, W. R. Park. 3, Mrs. Brown. *hc*, R. Clark; J. Pollock; Mrs. Keddie.

DUCKS (Any variety).—1, J. A. Mather. 2 and *hc*, Mrs. Dickie. 3, R. Torley. *c*, G. Thompson.

ANY OTHER VARIETY EXCEPT BANTAMS.—1, Mrs. W. Steven. 2, R. Blyth. 3, Miss R. Frew. *hc*, J. M. Wilson; J. Crawford. *c*, D. Handry.

GAME BANTAMS (Reds).—*Cock.*—1, P. Henderson. 2, H. Brownlie. 3, Master D. Laing. *hc*, Master D. Laing; H. Brownlie; Miss B. P. Frew. *Hens.*—1 and 2, H. Brownlie. 3, T. Raines.

GAME BANTAMS (Any other colour).—*Cock.*—1 and 2, H. Brownlie. 3, A. Kilgour. *Hens.*—1 and 3, H. Brownlie. 2, Master A. Frew.

BANTAMS (Any other variety).—1, Mrs. R. Frew. 2, R. Frew. 3, Miss J. M. Frew.

SELLING CLASS.—*Cock.*—1 and *c*, Miss M. Morison. 2, T. Raines. 3, W. Paterson. *hc*, Lieut-Col. C. Rice; A. Pratt; T. Raines; D. Annan. *Hens.*—1, A. Ridpath. 2, D. Gellatly. 3, T. Raines. *hc*, Miss Morison; P. Robertson; R. Somerville; A. Pratt; W. Webster. *c*, Lieut-Col. C. Rice.

PIGEONS.

POUTERS (Whits).—*Cock.*—1 and 3, J. M'Gill. 2, A. Anderson. *hc*, J. Mullion. *Hen.*—1, 2, and 3, A. Anderson. *hc*, W. S. M'Allister.

POUTERS (Any other colour).—*Cock.*—1, M'Gill Skinner. 2, R. W. Bryce. 3, A. Anderson. *vhc*, T. Mullion. *Hen.*—1 and 2, M'Gill Skinner. 3, T. Mullion. *hc*, A. Anderson.

CARRIERS.—*Cock.*—1, A. Smith. 2, J. E. Spence. 3, T. Raines. *Hen.*—1, A. Smith. 2, T. Raines. 3, J. E. Spence. *hc*, J. Lamont, jun.

FANTAILS.—1, A. Smith. 2, J. E. Spence. 3, A. Lockhart. *hc*, A. Crosbie.

TUMBLERS.—1, D. Brash. 2 and 3, J. M. Kidd.

NUNS.—1, J. Lamont, jun. 2, R. Laurie. 3, A. Duthie.

JACOBINS.—1, R. W. Bryce. 2, T. Raines. 3, J. E. Spence. *hc*, T. Nicol, Forfar.

TURBITS OR OWLS.—1 and 3, A. Anderson. 2, R. Lauria. *hc*, A. Crosbie; J. E. Spence.

ANY OTHER VARIETY.—1, J. E. Spence. 2, R. W. Bryce. 3, A. Crosbie.

CANARIES.

SCOTCH FANCY (Yellow).—*Cock.*—1, T. Scott, Carluke. 2, R. Hunter. 3, H. M'Dougal, jun. 4, R. Aird. 5, J. Kerr. *Hen.*—Special and 1, R. Jackson, Carluke. 2, H. Hoggan. 3, R. Chalmers. 4, T. Scott, Carluke. 5, D. Black, Dunfermline.

SCOTCH FANCY (Buff).—*Cock.*—1, H. Hoggan. 2, R. Hunter. 3, W. Innes. 4, A. Baird, Leith. 5, H. M'Dougall, jun. *Hen.*—1, M'Ewan Downie, Kirkcaldy. 2, J. Tweedie. 3, T. Scott. 4, G. Greig. 5, J. Kerr.

FLECKED (Yellow).—*Cock.*—1, R. Aird. 2, R. Hunter. 3, G. Greig. 4, R. Chalmers. 4, G. Spence, Dysart. *Hen.*—1, G. Spence. 2, R. Chalmers. 3, D. Kilgour. 4, J. Meiklejohn. 5, R. Hunter.

FLECKED (Buff).—*Cock.*—Special and 1, T. Scott. 2, H. M'Dougall, jun. 3 and 4, R. Chalmers. 5, W. Innes. *Hen.*—1, T. Scott. 2, R. Hunter. 3, B. Currens. 4, J. Elliott. 5, M'Ewan Downie.

GREEN.—*Cock or Hen.*—1, C. Cairns. 2, G. Greig. 3, G. Spence. 4, H. Hoggan. 5, J. Robertson, Edinburgh.

FOUL-FEATHERED.—*Cock or Hen.*—1, G. Cooper. 2, G. Greig. 3, P. Gray, Dunfermline. 4, J. Kerr. 5, T. Brown, Oakley.

MARKED GOLDFINCH MULES (Buff).—*Cock.*—1, 4, and 5, J. Robertson. 2 and 3, D. Young.

MARKED GOLDFINCH MULES (Yellow).—*Cock.*—1 and 3, J. Cowan, Dunfermline. 2, W. Kirk. 4, J. Robertson. 5, W. Bonthron.

THE MEALY POUTER.

MANY thanks to Mr. Huie for the straightforward and manly course he has taken to bring the Ponter controversy to a practical issue. In the Journal of December 24th he has made it known to the fancy that, so far as he is concerned, the long-despised and badly-treated Mealy is to be raised to a position of equality with other standard-coloured birds, and treated as such, giving your readers very cogent reasons for so doing. It now behoves other fanciers to strengthen his hands and do what they can in the same direction, and the issue is certain. With Mr. Huie on this side and the "RECTOR" on the other, with more to follow, we have the wedge well nigh driven home. If fanciers generally would accept Mr. Huie's resolve as a compromise, and agree to shake hands and be friends at this befitting season, the fancy will have no cause to regret that the controversy had been engaged in with, at times, a trifle more acerbity than the subject demanded.

The prize for the best Red, Yellow, or Mealy at the Kilmarnock Show was the gift of Mr. Gibson, a great friend of the Mealy, and was given with the view of raising it to its proper place, and he meant that it should be judged as a standard colour; but unfortunately the Committee overlooked this, and Mr. Huie, left without instructions, could not well do anything else than he did. Had the Committee acquainted Mr. Huie before he began his work as Judge what their object was in classifying the Mealy with Reds and Yellows, Mr. Mitchell's hen, which was left out in the cold, would have occupied a high position in the class, as she was certainly a splendid bird.

I do not know why it is, but somehow or other the Mealy has never found favour with fanciers in England. From my short experience I find that Mealies not only are more perfect in marking and superior in style, but they are more robust in constitution. I do not think any of those who set forth their claim ever made reference to this, whether intentional or not I do not know. We find that fanciers have always a wrinkle which they keep to themselves. Even Mr. Fulton, in his article on the Carrier—although he promised to tell all he knew—takes care to conceal from the novices the devices resorted to by the knowing ones in preparing their birds for exhibition. But this is a digression. I was saying that they were of a hardier constitution, and so are their young. My friend Mr. Ruthven facetiously described the disappointed fancier when a grand, vigorous, promising young bird declared itself a despised Mealy. Three chances to one, had it not been a Mealy it would not have survived to tell the tale.

Young fanciers know full well the difficulty they have in getting evenly-marked birds, even while breeding from evenly-marked parents. Let them try a Mealy, and report their success, that others may be encouraged. The first four years is the Pouter-fancier's Slough of Despond; the Mealy will help

them over that trying period, and the way to success after is clear.—David Lawrie, *Kilmarnock.*

DO BEES SLEEP?

It has not, we think, been proven that bees ever sleep. We have never seen one either in winter or summer asleep. Analogy and their very active industrious habits would lead to the belief that they do sleep. When, where, and how they do sleep, we have hitherto being unable to discover. In summer they work both night and day, and never seem to tire. In early life we thought they worked harder after a day of rest—that is to say, if weather kept all at home for twenty-four hours they were recruited in strength and vigour, and worked better on the day following. In later years we have considered, that in the absence of outdoor labour more work was done in the hive. When weather is favourable and honey abundant we know that frequently honey is gathered into hives faster than the indoor labourers can manage—it accumulates too fast on their hands. The cessation of outdoor work for a time enables the bees to remove the accumulations of honey from the centre combs, and store it up in their outer and upper edges. Thus the domestic arrangements are advanced, and room made for more honey, and more labourers are set at liberty to gather it. When bees have no domestic work to attend to, as is the case when a swarm is put into a hive of empty combs, they work prodigiously fast. By-and-by the brood and honey of such a hive require much attention. Hence, outdoor-work activity seems to abate. But when no bees leave their hives we have never been fortunate enough to find one asleep or anything like it. Young queens on coming to perfection sometimes pipe or call for seven days without cessation. During that time they can get no sleep. And if it be true that pregnant queens deposit in cells two thousand eggs a-day—that is, eighty eggs every hour, throughout the summer months, when, pray, can they find time to sleep?

In winter bees have few domestic duties to perform, and there is no honey to gather. But the question of bees sleeping or hybernating in winter is just as difficult to answer as that of sleeping in summer. I know what others say on this question, but I like to read nature through my own eyes; and I trust the readers of this Journal will ever be guided in great measure by their own observation and intelligence. I have examined hives at all seasons, even when there was 20° degrees of frost, and I never found a bee asleep. Still I do not say that they never sleep. Can any of our readers give evidence on the question?

Bees rest in winter, and crowd together for mutual warmth. To-day (2nd of January), the wind being south, and the mercury 2° above freezing, my bees attempted to come out for an airing, but were prevented owing to the snow being still on the ground. Up to the present time bees have been healthy this winter, and if prevented from leaving their hives while snow is on the ground, will likely be in good condition when spring comes. But absolute confinement is hurtful to bees. When weather permits they prefer to go abroad to evacuate, and if they do this when snow is on the ground they fall into it in hundreds and perish. Hence their doors should be shut when snow is on the ground.

The question as to whether a north or south site is the better for bees in winter, has often been put and discussed. Mr. Nutt who had a hive of his own was rather an impulsive bee-keeper, and came to hasty conclusions. "In November, 1834, Mr. Nutt placed three hives on the north side of his house and three remained on the south side.

SOUTH.	lbs.	NORTH.	lbs.
No. 1 weighed	35	No. 4 weighed	42
„ 2 „	38	„ 5 „	32
„ 3 „	40	„ 6 „	37
	113		111

On the 26th of the following March they weighed as follows:—

	lbs.		lbs.
No. 1 weighed	15	No. 4 weighed	37
„ 2 „	16	„ 5 „	27
„ 3 „	19	„ 6 „	32
	50		96

The first three—those on the south side—lost 63 lbs., on an average 21 lbs. each; those on the north only 15 lbs., average 5 lbs. each. The three last—those on the north—swarmed in May, the three first not till July."

Some apiarians may consider the experiment conclusive that a north aspect is better for bees in winter than a south one. The results of the experiment have no weight with us, believing that if any unbiased man had been on the spot he would have been able to trace the difference of results to something else than position of hives. At present we are not going to attempt an analysis of Mr. Nutt's experiment. In our experience we find that hives do as well in one position as another—that on the north side of a house the bees are abroad at the same time as those on the south side—and that neither the consumption of honey nor the times of swarming are much affected by the position of an apiary. We have hives looking east, north, west, and south, and have invariably failed to find any advantage that one may have over the other. The strength of the hives in autumn is of far more importance than their position or aspect. Strong hives eat more honey, are less affected by severe winters, and swarm earlier than weaker ones. Warm covering of hives in severe winters and early spring months is of great advantage to bees.—A. Pettigrew.

OUR LETTER BOX.

Great Yarmouth Poultry Show (*J. Watts*).—The Secretary ought to have replied to your applications. Your course to pursue is to ascertain from the railway officials' parcel book if your birds were delivered, and then you will know who to proceed against.

Manchester Poultry Show.—Mr. J. Lederer informs us that he took the first prize in the Trumpeter class at Bells Vue, Manchester.

Houdan and Brahma Characteristics (*G. B.*).—Good crest and muffling, comb neatly branched, legs with five toes like the Dorking, sound-coloured, free from a yellow tinge, size, shape, and style, are the principal characteristics of the Houdan. Brahmas should be very large with a neat pea-comb, heavily feathered in the legs, but not vulture-hocked. We would advise you to attend some of the poultry shows and closely examine the winning birds in connection with the points to which we have referred.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1874—5. Dec. and Jan.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 30	30.327	24.0	23.4	N.E.	34.6	30.1	19.1	40.2	20.0	—
Th. 31	30.260	21.3	21.5	N.	34.1	24.3	19.0	22.8	15.8	—
Fri. 1	30.175	27.2	27.0	S.E.	33.9	33.0	20.7	36.3	20.6	0.422
Sat. 2	29.901	36.8	36.7	W.	33.0	44.2	26.6	60.6	26.6	0.222
Sun. 3	29.921	48.2	47.2	W.	33.0	49.7	35.6	74.8	30.8	0.090
Mo. 4	29.877	49.1	48.3	S.	33.9	52.5	42.4	70.1	34.1	0.042
Tu. 5	29.978	42.5	42.2	W.	37.8	49.0	41.7	64.8	38.7	—
Means	30.063	35.6	35.2		34.3	40.4	29.3	52.8	26.7	0.776

REMARKS.

30th.—Cold but sunshiny morning, and a fine frosty day.

31st.—Very thick and very dark all day, and bitterly cold.

Jan. 1st.—Much finer, but still very cold and frosty till the evening, when there was a slight fall of snow, and a thaw and fall of rain at midnight, freezing on the ground.

2nd.—Foggy morning, very fine in the middle of the day, but a wet night; much warmer.

3rd.—Bright all day till 3 P.M., then dull; but fair till night, when it rained. Snow all gone, but the roads very sloppy.

4th.—Very dark early, but soon clearing off; fine in the middle of the day; warm and damp in the evening.

5th.—Dark, but fair early; fine from 10 A.M. to 3 P.M., then dull; still warm.

With the old year the frost may be said to have ended; for the silver thaw of Friday evening was merely the result of the frost left in the ground. December 31st was remarkable for the very low maximum temperature.—G. J. Symons.

COVENT GARDEN MARKET.—January 6.

There is no revival of trade of any consequence yet. Supply was rather better in consequence of the favourable change in the weather, prices remaining nearly the same.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	to 1	6	Oranges ₱ 100	4	0	to 10	0
Chestnuts bushel	10	0	20	0	Pears, kitchen doz.	2	0	3	0
Filberts lb.	1	0	1	6	dessert doz.	2	0	4	0
Cobs lb.	1	0	1	6	Pine Apples lb.	2	0	5	0
Grapes, hothouse lb.	4	0	8	0	Plums ½ sieve	0	0	0	0
Lemons ₱ 100	8	0	12	0	Walnuts bushel	10	0	12	0
Melons each	1	0	3	0	ditto ₱ 100	1	0	6	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes doz.	2	0	to 3	0	Leeks	0	3	to 0	0
Asparagus ₱ 100	0	0	0	0	Lettuce doz.	1	0	2	0
French per bundle	0	0	0	0	Mushrooms pottle	0	3	0	0
Beans, Kidney ½ sieve	0	0	0	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	0	0	0	0	Onions bushel	3	0	5	0
Beet, Red doz	1	0	3	0	pickling quart	0	3	0	0
Broccoli bundle	0	3	1	6	Parsley per doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	3	0	4	0	Parsnips doz.	0	9	1	0
Cabbage doz.	1	6	2	3	Peas quart	0	0	0	0
Carrots bunch	0	6	3	0	Potatoes bushel	2	0	4	0
Capsicums ₱ 100	0	0	0	0	Kidney do.	3	0	5	0
Cauliflower doz.	4	0	8	0	Radishes doz. bunches	1	0	1	0
Celery bundle	1	6	2	0	Rhubarb bundle	1	0	1	6
Coleworts doz. bunches	4	0	6	0	Salsafy bundle	1	6	2	0
Cucumbers each	2	0	3	0	Scorzonera bundle	1	0	2	0
pickling doz.	0	0	0	0	Sea-kale basket	2	0	3	6
Endive doz.	2	0	0	0	Shallots lb.	0	3	0	6
Fennel bunch	0	3	0	0	Spinach bushel	0	0	4	0
Garlic lb.	0	6	0	0	Tomatoes doz.	0	0	0	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish bundle	0	4	0	0	Vegetable Marrows doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week.	JANUARY 14—20, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises h. m.	Sun Sets h. m.	Moon Rises h. m.	Moon Sets h. m.	Moon's Age. Days.	Clock after Sun. m. s.	Day of Year.
14	Th	Royal Institution at 3.	42.1	29.9	36.0	2 af 8	16 af 4	9af 11	morn.	)	9 22	14
15	F	British Museum opened, 1759.	41.7	28.9	35.3	2 8	18 4	15 11	53 0	8	9 44	15
16	S		42.0	31.0	36.5	1 8	19 4	33 11	20 2	9	10 5	16
17	Sun	2 Sunday after Epiphany.	42.6	28.7	35.6	0 8	21 4	58 11	49 3	10	10 25	17
18	M		42.6	31.3	36.9	59 7	23 4	after.	17 5	11	10 41	18
19	Tu	Twilight ends, 6.25 P.M.	43.1	30.6	36.9	58 7	24 4	25 1	35 6	12	11 8	19
20	W	Royal Horticultural Fruit and Floral Committees [at 11.	42.4	30.6	36.5	57 7	26 4	32 2	38 7	13	11 21	20

From observations taken near London during forty-three years, the average day temperature of the week is 42.3°; and its night temperature 30.10°.

POTATOES IN 1874.

THE above title is intended to imply a caution that the noble tuber as grown in this country is variable according to the climatic conditions of each year; and as the past may be looked upon as a test year, the season having been an unusually trying one, a few notes of failures and successes may deter or captivate.

I have had on trial here about seventy so-called varieties—early, general crop, and late. The soil on which they were grown is an adhesive but well-drained calcareous loam, almost devoid of silex, and the general result I will first endeavour to define.

A batch of earlies, previously sprouted in the light, and under like conditions (an important consideration in testing early Potatoes), were planted in sunny and sheltered spots in the open air on the 21st of March in land in good condition, without manure. These were injured by the frosts of the 11th and 17th of May, and produced little more than seed again, although the quality was good.

Another batch of earlies and second earlies, planted in deeper soil in good heart with a special Potato manure mixed with about three times its bulk of burnt earth and rubbish in rows 3 feet apart on the 11th of April, turned out a good crop both in quality and quantity, but from the extreme drought in this district in the spring and summer at "dig-day," they showed a tendency to eupertuberate.

On the 16th of April I planted, after the plough, a large quantity of earlies on a shallower soil with the same kind of manure sown in the drills. This planting barely produced seed again, although the quality was very fine. The land never got thoroughly pulverised, and on raising the crop in August the manure turned up as sown, no rain having reached it.

The late varieties, planted from the 18th to the 24th of April without manure, had, when tried in August, vigorous haulm with scarcely any tubers, and when lifted in October they turned out a heavy crop of fair quality, but have since shown considerable disease, and keep otherwise badly.

Amongst the earlies and main crop I only found a single instance of disease, which appeared in the robust-growing kidney Excelsior. And I may, perhaps, be pardoned for here observing that I have always found that the more vigorous and healthy a plant is the more susceptible is it of an attack of parasitic fungus, in case any check is sustained in its growth, and providing the seeds of the fungus be present.

On the 23rd of February I planted under lights in a slight bottom heat good-sized tubers of Early Handsworth and King of Earlies, both round varieties; Mona's Pride, Walnut-leaf, old Early Ashleaf (the green sprouting variety from Messrs. Hooper & Co.), and two other early varieties, which turned out to be Walnut-leaf and Early Ashleaf. The Early Handsworth was the first ready to lift. This variety was sent out about fifteen years ago by Messrs. Fisher, Holmes, & Co., of the Handsworth Nurseries, and, after trial by the Royal Horticultural Society, was then considered to be the earliest, and this was confirmed by my own trials about the same time. I afterwards accidentally lost the stock, and although I ordered it of several respectable firms, I could not succeed in getting it true until I wrote to Messrs. Fisher, Holmes, and Co. It has also the shortest top of any Potato I know. It produces from four to six fair-sized tubers at each root, with few small. The flesh is firm, but yellowish; flavour good. It has probably gone out of fashion from being somewhat below the average in productiveness; but for earliness it is invaluable. The absence of this variety and the Coldstream Early from the recent trials at Chiswick is somewhat singular; the latter variety having also obtained a high character for earliness. In my own trials the Coldstream was, however, later and taller than the Handsworth and several of the other early varieties.

King of the Earlies (American) is the handsomest of the early round Potatoes, having firm white flesh; is nearly as early and more productive than Handsworth, but the flavour is sweetish, and unsuited to English tastes. With this variety I took the prize for round Potatoes at Northampton in September last in competition with most of the well-known sorts produced on the fine garden land in that neighbourhood. The true old Ashleaf followed the Handsworth next under glass, and is to be preferred also, on account of its shorter haulm, to the other kidney varieties for forcing. But for open-air culture Myatt's Ashleaf, or—what appears to be a very fine stock of it—Veitch's Ashleaf, is the only one of the class I intend to grow in future.

For the general crop I have selected for quality from the second earlies Mr. Fenn's Rector of Woodstock, a very handsome flattish round Potato; Climax, very prolific; the new American Snowflake, handsome and good; Cobbler's Lapstone; Red Emperor, from Messrs. Barr and Sugden, a good-looking reddish Potato; and Mr. Fenn's Bountiful, a first-rate medium-sized kidney. I shall also grow again President, King of Potatoes, Beaconsfield, and Premier (from Mr. Gilbert), all handsome, and apparently useful sorts, but not tried here in sufficient quantity at present. For appearance Parker's Ashleaf, a scarce flattish-round variety; Giant King, and Jackson's Kidney I think the handsomest of all Potatoes, and in this I am supported by the opinions of Mr. C. Frisby, the clever gardener to Mr. Chaplin, through whom I originally received the sort, and Mr. Gilbert; but it is smooth-skinned, and as it has rarely more than a single eye, it requires great care in planting, for if the sprout be rubbed off the tubers sometimes never start at all.

As a special and limited selection from the above for small amateurs who garden in the rich old humus of towns, I would recommend for early work Early Ashleaf and Early Handsworth, to be followed by Veitch's Ashleaf, and for general crop Rector of Woodstock and Cobbler's Lapstone. These are true garden Potatoes. It is not advisable to plant the coarse-growing later sorts in such a position, as they can usually be produced more

profitably and of better quality as an agricultural crop. Some years ago I found myself in a dilemma as to the best sort to grow in town gardens for general work, and was kindly referred by Mr. Fenn to the Lapstone, the best-flavoured of all Potatoes; and judging from results, it would appear to have been one of that indefatigable cross-breeder's aims to secure a good town-garden Potato, and in this he seems to have succeeded admirably with Rector of Woodstock, which has larger tubers and is more fertile than the Lapstone. Formerly I used to grow Early Oxford in such situations, and found it a very valuable early and yet long-keeping sort. I, however, lost it, and have never again been able to get it true. Singularly also the true variety does not appear to have reached the Royal Horticultural Society.

Of latish main crop varieties I have selected, as the best for quality and appearance, Oxfordshire Kidney, rough-skinned, and very good; Late Rose, large, and very prolific; Model, very handsome and good; Brownell's Vermont Beauty—of which I received two varieties, one through Mr. Dean and Messrs. Hooper & Co., said to be Messrs. Bliss's type—a handsome, longish, and sometimes kidney-shaped sort, of a similar tint to Early Rose; the other from Messrs. Carter & Co., a handsome roundish variety, of a darker red in colour, and apparently intermediate between Wood's Scarlet Prolific and Red-skin Flourball, but which of the two is the true Richard I am unable to determine. From the Chiswick Report of 1873 the former would appear to correspond with the variety tried there. Both sorts were late with me. Scotch Blue, synonymous with Duncan's Seedling, is purplish-skinned, and another good main-crop sort, and not so late in ripening. Prairie Seedling and Willard's from Messrs. Sutton, also Red Fluke from Mr. Dean, showed sufficiently well to induce me to grow them again. Regents, of which Gryffe Castle and the Dunbars are the best. Flukes and Paterson's Victoria, or rather the selection from that variety called The Queen, which is undoubtedly A1 as a general-crop late Potato, cannot be dispensed with by large growers. Red-skin Flourball, from Messrs. Sutton, I have grown here for three years, the last two in considerable quantity; but on this soil it is coarse, waxy, and liable to disease, and not so good for very late purposes as Wood's Scarlet Prolific. We have a very late sort grown in this locality with numerous eyes, known as the Pink Kidney, and it is undoubtedly a good keeper, but its flavour is too strong to suit my palate.

From the trials I have been unable to discover sufficient distinction between Veitch's, Rivers's, and Myatt's Ashleaf, Gloucestershire Kidney, King of the Kidneys, and Caversham Defiance; and in rounds, Early Gem did not come up to King of the Earlies. Amongst the Lapstones, which include Pebble White, Taylor's Hybrid, Berkshire Kidney, Ashtop Fluke, and Cobbler's Lapstone, I shall retain only the latter, as, if not identical, they have all a strong family likeness. Belgian Kidney, which has a distinct long tuber, and Wonderful Red Kidney, being good in appearance and of fair quality, are worth attention for exhibition. Rintoul's Early Dun and Fortyfold are both Regents in type, the former said to be a graft hybrid. Silver-skin, Excelsior, Dawes's Matchless, Webb's Imperial, and Prince of Wales are very fine second-early kidneys, but watery, and apparently unusually subject to disease. Amongst Americans, Extra Early Vermont seems very like Early Rose, very prolific, and useful in a dry season like the past, but usually unsuited to the English palate and climate, except where mere quantity is a desideratum; for this reason I shall discard Peachblow and Bresee's Prolific and Peerless, the two latter both very fine in appearance. Compton's Surprise, the chief recommendation of which variety appears to be its productiveness, I have not tried.

We are, however, greatly indebted to our transatlantic friends for an entirely novel strain. As a rule their Potatoes are vigorous and rapid growers, and in a hot summer or dry climate like that of most of the American States, where our firm-fleshed small early sorts would probably be worthless for produce, their flavour is doubtless improved, and the growth less luxuriant. The best seem to be Early Rose, said to have originated in Alaska, and perhaps the parent of most of the new American sorts. Late Rose, a selection from it, King of Earlies, Brownell's Beauty, and Snowflake, these will be of service to those who like a light-fleshed Potato, easy of digestion, and will probably come in for cross-breeding purposes to increase the fertility of our earlies. But for an Englishman's Potato we must look to the advances made by the late Mr. Paterson and Mr. Fenn. His Rector of Woodstock ought also to displace the Irishman's Potato, which appeared to be the Early Shaw, a sort very much run upon in Ireland, and the only one I met with at table during a fortnight I spent there in August last in the south and west. It is a deep-eyed and waxy second-early variety, of good flavour, but unprofitable where Potatoes are jacketed before being brought to table. I never saw a kidney Potato there, although constantly changing my quarters.

Of novelties to come—and they seem to be thickening—we have Mr. Fenn's Early Market and Early White Kidney, both of which are said to be first-rate, and have been certificated by the Royal Horticultural Society; also his Perfection Kidney, a quasi-graft hybrid, the earliest and handsomest of the Lapstone family; and The Favourite, a dwarf second-early variety, of superb quality, and good for exhibition. These are being sent out by Mr. Dean, of Ealing and Bedfont. From America, Alpha (Pringle's), 12*s.* per lb.! is said to be ten days earlier than Early Rose, and both it and Messrs. Thorburn's Early Paragon to excel their British compeers. Mr. Brownell's Early Nonsuch and Eureka are pronounced as first-rate, and are likely to be competitors for the Whitcomb prize of $200 to be awarded there four years hence for the best seedling Potato. In France La Reine Blanche is stated to be excellent in quality and well adapted for variable seasons; and if we add to these Cattell's Eclipse, Dwarf White, Early Dimmock, and Barron's Perfection, all certificated by the Royal Horticultural Society during the past season, and Messrs. Lee's Early Hammersmith Kidney, we have fourteen sorts—surely enough for the most enthusiastic Potato-maniac to experiment on! and what with the prospect of International Potato Shows at the Crystal Palace and in France next autumn, the noble tuber appears in a fair way to become an enthroned dignity amongst vegetables as the Rose is amongst flowers; and at this rate some of your readers may live to join a Potato Society, and to read the Potato Chronicle.—Thomas Laxton, *Stamford.*

SELECTION OF ROSES.

I was much delighted with, and interested in, the Rose tournaments or elections which were reported in your pages. The wonderful manner in which certain Roses obtained almost unanimous votes of confidence in spite of necessary differences of climate, soil, and temperature surprised me; and I considered these lists very valuable to the amateur Rose-grower, and perhaps also to the nurserymen, as indicating the sorts likely to be in demand. But I confess the selections of Roses made occasionally in your columns puzzle me. Taking a selection of twenty Roses made in your issue of December 24th by the Rev. W. F. Radclyffe, commencing "1864, Achille Gonod." I placed my own list of the twenty best Roses alongside it, and was surprised to find the two lists had no Rose in common. In this list, and in the amplified one in your paper of December 31st, the Roses are probably not intended to be placed in order of merit; but the fact stated above suggests to my mind that anyone asking for a selection of Roses should state, first, proposed mode of cultivation; second, climate; third, soil. I have purposely placed them in this order. Let me, then, state my position to commence with. 1st, I am cultivating in a high double greenhouse up the rafters, similar to growing Vines (there were Vines there before). 2nd, Climate is the ordinary greenhouse, with sufficient heat to induce flowering in March and April. 3rd, The soil is the best turf-mixture one can make, in slate boxes, between the wall and pipes, but not touching the pipes; and we give them some pretty strong drink when we see the flower shoots. Now, I want to know what Roses your correspondent would recommend me; and please to remember I am fearfully hard up for a crimson. Meantime I will tell that I have given up two Roses I bought marked climbing: Climbing Devoniensis, stock unknown, because it would not climb; Climbing Victor Verdier, same offence, coupled with aggravated mildew.

I give my most successful trials in their order of merit. 1st, Fortune's Yellow, magnificent flame colour, the finest half-open buds I ever saw; 2nd, Maréchal Niel, Céline stock from Curtis of Torquay, enormous flowers; 3rd, Rêve d'Or, summer-flowering yellow, very free; 4th, Gloire de Dijon, flowering now; 5th, Devoniensis (not marked climbing), on seedling Briar, from Prince of Oxford. N.B.—The above five have reached from 15 to 20 feet long, with clean stem 4 feet. 6th, Duc de Magenta, apricot colour, about 8 feet. And I am now trying the following:—1st, Perle de Lyon, a splendid deep yellow, but I think a doubtful climber; 2nd, another Maréchal;

3rd, Souvenir de David, crimson Tea, lovely colour, seems Hybrid China, from Curtis of Torquay, doubtful climber. I think I might make Safrano climb; but I doubt if either Belle Lyonnais or Sombreuil are worth trying, though certainly the former will climb.—Sucker, *West Kirby, Birkenhead.*

A FEW FERNS NOT USUALLY WELL GROWN.

Some people think, say, and even write, that Ferns are the simplest plants imaginable to grow. I differ entirely from such an opinion, and after an experience of many years I find a good many of them that puzzle me still.

That more Ferns are killed by heat than by cold, every year shows me more and more clearly; but the result of my own experiments recently leaves no doubt whatever on my mind that such is the case, and further convinces me that the reason why there are so many failures is that cultivators coddle them to death. Some of your readers may say here, "Nonsense. I never saw a Fern yet that I could not manage easily enough;" and of such a Fern-cultivator I ask, Have you succeeded easily, or indeed at all, in the case of the following kinds?—Didymochlæna trunculata or truncatula. This is classed as an evergreen stove Fern. I find it is nothing of the kind. Did you ever find the pinnæ drop off, and wonder at the reason? I grew this in a stove for several years, and though the plant thrived apparently, and threw up plenty of fronds, all the pinnæ invariably dropped off, leaving the stems bare and unsightly. I adopted all kinds of ideas, but none of them succeeded. Lastly, resolved either to kill or cure, I potted my solitary specimen in strong loam only, and removed it from the stove to my British fernery, which has no heat beyond a flow and return 4-inch pipe to exclude frost. The result has been almost magical, for the plant throws up fine fronds of a brilliant colour, and though I repeatedly shake them purposely, every one of the pinnæ keep their places, and at this moment all the fronds have been on many months, and still look as fresh as paint, with all the pinnæ perfect. I am greatly pleased with my success in this instance, for this Fern is truly a beautiful one when grown as I am now trying it. Lomaria cycadæfolia and zamiæfolia, decidedly two of the handsomest of their tribe, and, when well grown, charming: the same remarks apply to both of these, which are in my British fernery, and have been so all this severe winter, the frost occasionally getting inside the house 2° or 3° (my boiler would not work, being badly set), and no injury whatever resulting. Grown under perfectly cool treatment these two Ferns throw up much stronger fronds, are quite clear of insects, and the vivid green of cycadæfolia is a marked contrast to the pale sickly colour of it when coddled, or even moderately heated. I have tried the latter system, and failed miserably.

In the same house I have had all winter three large specimens of Gleichenia flabellata which perfectly revel in strong loam, plenty of water, good drainage, and absolutely cool treatment.

Mr. Findlay, the Curator of the Manchester Botonical Gardens, who visited me a few weeks ago, expressed his astonishment at the treatment first of all, and next at the luxuriant growth of these Gleichenias in particular, and he added that the moment he returned home he would remove his own plants from heat to cool treatment.

Unless G. flabellata is cultivated in a perfectly cool house it produces small, yellowish-coloured, sickly fronds—a marked contrast to the vigorous, bright glossy green, immense-sized fronds, the result of cool treatment, some of which on my largest specimen measure more than 2¼ feet across. I enclose portion of an old frond 15 inches long, and rather over 3 wide—most unusual size, I think.

Much doubt was expressed at the Pomona Palace Show, held in Manchester the first week in December, whether my large plant of Gleichenia rupestris (awarded the silver medal as the finest plant in the Exhibition) would survive the extreme cold to which it was there subjected. I had no such fear myself, as the plant had been previously hardened-off almost within an inch of its life, and it is now growing vigorously. I will return to the subject shortly.—T. M. Shuttleworth, F.R.H.S.

Deficient Rain.—On page 585, No. 718, of the Journal, Mr. Wright says that from the end of March to the 22nd of July only 3·24 inches of rain fell, and asks, Is not that unparalleled in Britain? In 1868 we had only 0·88 from April 20th to July 20th, as may be seen by referring to the Journal of July 30th, 1868, page 76. We have had a most extraordinary variation of temperature here. On January 1st we registered 26° of frost; and on January 4th, at 8 P.M., the glass stood at 50°.—John Platt, *Hillington, King's Lynn.*

WEATHER, WORK, AND MEANS.

The work of the garden must be done. It cannot be done in spite of the weather, nor to the greatest advantage, without due and sufficient means. Every man endeavours to do work at the proper time of doing it, or at least he should so endeavour with his whole power, as that is the most creditable to himself and most profitable to those employing him. In the great majority of gardens aid only just sufficient to the carrying on affairs is allotted, even if the weather is fairly favourable to the steady prosecution of routine proceedings. Many circumstances of which the *employé* can know nothing may conspire to prevent the owner feeling himself warranted in providing a prodigality of aids to meet every want and emergency of his garden. An enthusiastic gardener may, and no doubt does deeire all this, and is surprised that his employer cannot see the same as he. But then the coachman, the keeper, and the butler are the same. All wonder where the master puts his eyes. Each one thinks his own department, at any rate, shonld be abundantly provided for, whatever else may be restricted. That is human nature: nor can any fault be found for this high estimate of their calling by those who represent it. It is in itself a worthy and creditable feeling which impels every man to do the best in his position, and for the honour of his craft. But we cannot make or reasonably expect a gentleman to look at everything through a pair of garden, or game, or stable magnifiers continually. He will look with his natural vision at all, divide his interest over the whole, and form his judgment on the dictates of half a hundred other things unconnected with either. That may be taken as fact, and it is as well to admit it at the outset, as paving the way to a more sober and just estimate in one's judgment of another. Whatever, then, the gardener may be, we must accept the fact that every garden owner is not a garden enthusiast; yet, for all that, such owner may derive much pleasure and benefit from his garden. He may, and no doubt does, enjoy its beauty, neatness, and health of its crops, without, however, making it the be-all and end-all of his outdoor domestic pleasures. Certainly the garden is full of them if they could but be brought out by a more lively interest and sympathetic care. This class of garden owners (and they are the great majority), apportion aid to this department which, by thoughtful application and hard work, are made fairly sufficient for the purpose in the absence of any natural and unpreventible impediments preventing the right work being done at the right time. That is the very keyhole of good and profitable gardening. The neglect of a week, aye, even the neglect of a day, in the completion of any given work, may, and has, and will again, make a momentous difference in the looked-for results. Indeed, all the difference between success and failure may be locked up in the small period of less than a week. Neither can it be expected that an employer is able to recognise this, for the very sufficient reason that it may be many months before the effect follows the cause, and by this time both the said cause and the circumstances which produced it are vanished from the memory of the master, yet not so from the man, but to whom it is hard work to explain a failure, which by a little timely aid might have been prevented.

A season of extreme drought is an immense trial to a man who under ordinary circumstances always has his hands full. He must work with redonbled effort to keep things going, by watering and other efficient means to the same end. Eventually the rain comes. Planting must be done, but the ground is not ready. Celery must be got out, but the trenches are undug. By the time this necessary work is done the showers are gone and the burning sun is as fierce as ever, and planting must be done under unfavourable conditions, and extra labour be involved to carry on the unestablished and struggling crops. The week—all-important—was lost, and nothing can afford adequate compensation. Yet there was no help for it. A little extra aid at a timely juncture and under pressing circumstances would have made all the difference between a full and satisfactory, and a partial and unsatisfying result. The autumn comes with its falling leaves and interminable litter. Ground is cleared, waiting for manure and spade. The hands of the worker may itch to get at it. But a tidy appearance

must be kept as well as may be; and when it is not raining the immediately pressing work is cleaning, and securing, and protecting. The frost and snow come, even perhaps before all is secure, and the ground is still undug—unmanured. That is the inevitable result of a wet autumn and early winter. We have next early spring upon us, and not only the winter's but much autumn work in arrears. There has been no help for it. All has been done that was possible under the conditions, yet here is the work undone. What is—what must be—the result? The owner is uncomfortable, but his discomfort is not nearly so keen as the gardener's, who has plodded on under a crushing sense of self-conscious helplessness, and now is drinking the bitters he knew must come. Here is autumn—winter's—work crushed on spring, and a jumbling-together of the three when summer's work cries aloud for labour. The year's muddle is complete, and the garden, instead of being a pleasure and delight, is a source of trouble and anxiety to owner and workman.

In hundreds and thousands of cases the position at this moment is as just described. The long, drizzly, littery autumn was followed by a sudden, early, and prolonged winter. The work, which in an ordinarily mild season would have been completed, is pushed on spring, when every day brings its own demands on the worker, and arrears must be left undone, or at least shuffled over, to the certain disadvantage of everybody concerned. There is a remedy, but the golden season of autumn is lost. That is the time of time of times to press on, by a little extra labour, the seasonable work of the garden. As soon as ever ground is cleared a double-quick march should be made to get it turned up and the manure under. Digging before the surface has become cold by frost or logged with surface water is the royal road to a profitable goal. That makes a garden in winter enjoyable by a sense of order and neatness, benefits the ground by a way nothing else can, gives health and freedom to future crops, lessens summer labour, and concentrates—what is there—adequate strength to the ever-recurring work of the hour, and secures also this great—important—desideratum of making master satisfied and man contented. That may be done by a little timely aid at a critical time, and assuredly nothing pertaining to a garden is better worth the doing. But that time is past, and yet much autumn—winter's—work undone.

The position is this: The work of two terms heaped on one, and within one short march of another, for spring will soon be on us with its urgent call to duty. To extricate himself unaided, one man must do the work of two. Logic and experience alike drive to that plain fact. Can he do it? Clearly not. He must have aid, or work be half done and the summer a muddle. Experienced owners who care for their gardens will recognise the state of the case, and their practical acquaintance with seasonable routine will suggest the aid they will give unasked. That is pleasant and satisfactory. Those less experienced will naturally lack that discernment, but may not lack the consideration when the case is put before them. A modest, hopeful, plodding man has diffidence in putting his own case, and keeps plodding on. The time comes when he is out of his depth, and compelled in self-defence to revert to the cause of his difficulty. How many kindly employers would then reply, "Why did you not tell me at the time, and I would have helped you?" No doubt there are many such. This is to let them know, while there is yet time, what the position is now, and what they may do to make their home-surroundings enjoyable and prosperous in the ensuing season. Not, be it observed, as altogether conferring a favour on the man, although he will so regard and appreciate it, but as a work whereby he himself will benefit in the better state and prosperity of his garden, and as winning, by encouragement given at a happy moment, the more willing and consequently more profitable services of a good servant; and if he happens to be only moderate and such encouragement fails to improve him, well then ——, but I will not pass judgment.

Now, have I been leading too fast, and shall I apply the lash? Perhaps it may be necessary. Do not, then, be in haste to make up for lost time in putting on force to manuring and digging the moment inclement weather takes its departure. Let the ground have time to drain, and the surface become naturally firm, dry, and clean to work. Do not be driven to turn under any frost and snow; the earth is cold enough without any such violently cooling supplement. It takes half the summer to warm ground in which ice is buried 6 inches deep, and plants cannot grow freely in a soil-temperature too low for their natural requirements, but only exist and invite insects. It will therefore be wise to wait awhile for favourable conditions and then press on. In the meantime there is another kind of waiting—steady industrious men waiting for work, with dependent families made hungry by frost. They will be glad to bring up arrears and be benefited. Their labour will be profitable; the garden manager will have a fairer field for his skill, and produce a better reward by his industry; and the employer may rejoice in the good he has done—good of the best kind, inasmuch that by benefiting others he has benefited himself—a fitting inauguration of the yet new year. —J. Wright.

OUR FORGET-ME-NOTS.

Who has not while strolling by some water side paused to admire our beautiful Forget-me-nots, and whose lovely blue wins attention and charms the eye? Myosotis palustris—why do we not see this native gem in our moist borders in greater abundance? Is it because it is to be seen in almost every ditch and pool, or is it too common to be taken into consideration? Be this as it may, we have not a more beautiful flower on our native soil, nor one more easy to cultivate when once established. It requires very little care, and will prosper by land or by water. It may be increased by seed or division; it sows itself, and the seedlings may be moved to the place intended for it when large enough. It is a most useful plant for bouquets, and may be made available for indoor decoration. Grown in pans in a cold pit or frames with plenty of air, and well attended to with water, it may be kept in bloom nearly the year round. Beautiful as it is when cultivated, it is seen in its greatest beauty in its own native habitat by the pool in the early morning, when the sun is just peeping upon it and its flowers are bathed in dew, or when evening's mantle subdues the light which falls on them.

It should hold a very prominent place in the early spring garden; will succeed in most soils, but should be well supplied with water in dry situations. When past its best it is easily removed to be replaced by other occupants of the garden.

Myosotis dissitiflora is a very desirable border flower, often cheering us with its lovely flowers from early spring till late in autumn. It is of compact habit, is easily increased by seed, requires little care, but often requires the hoe to hold it in check.

I think there is a little confusion respecting this and other Forget-me-nots which, if it could, would be as well cleared up. Have we not the same plant under different names? They are a widely distributed family both in our own and other lands. The alpine species do well on a moderately moist rockery. They are not very particular as to soil; a compost of good loam, sandy peat, leaf mould, coarse grit or charcoal dust will suit most of them. They require drainage and attention in watering.

Myosotis azorica is a real gem and an acquisition to any collection. M. californica is a very desirable plant, its flowers being white producing a fine contrast with the blue varieties, and requiring the same treatment. M. rupicola, the queen of the family, ought to be on every rockery in the land and in every collection. Being one of our own native species makes it the more desirable. It is well adapted for edging the foot of the rockery, but requires good drainage and a rather shady situation. It may be grown in pots for indoor decoration, and should be seen in masses to be appreciated; when so seen it cannot be easily forgotten.—Veritas.

DO VARIETIES WEAR OUT?

The Journal of Horticulture has reproduced an article written by Professor Asa Gray, in the *New York Tribune*, on the wearing-out of varieties.

Mr. Asa Gray having done me the honour to notice my opinion on the subject, I have thought it necessary to send him the following answer.—Jean Sisley, *Lyons*.

"Sir,—In reply to the article you have published in the *New York Tribune*, and in which you have done me the honour to refer to me, I take the liberty to lay before you that, in my opinion, there are two incontestable facts—

"1, The unity of universal life.

"2, That every individual is a variety.

"It follows that in all the universe and among all beings life is transmitted in like manner. That every creature which exists ought to die and re-enter universal life to make room for other beings of its kind, or more highly perfected than itself.

"That variability is manifested everywhere. That there are

not two leaves of the same tree which identically resemble each other. That no two beings, not even twins, are exactly alike. That the seeds of the same plant, of the same capsule, never identically reproduce the mother, and that no one of them is identically similar to the others, not even among annual plants.

"Then if that is so, man cannot by artificial means perpetuate that which Nature has made variable. Man cannot have the power of changing anything to natural laws. Those who say that man by artificial means can prolong indefinitely the existence of a variety (of an individual), can they furnish the proof? Is the life of man long enough to enable him to know the duration of the existence of a plant? We know that annual plants die when they have accomplished the act of reproduction. Has anyone studied the duration of perennial plants?

"It may be objected to the extinction of varieties, that Nature has provided a great number of vegetables with the faculty of continuing their existence by suckers, tubers, or rhizomes. But as alongside of this means of reproduction, Nature has put that of the continuation of the race of the species by seed, I conclude from it that the first means cannot be but temporary, and that the second warrants the admission that Nature does not wish perpetuity of the variety, because it would be contrary to the law of variability.

"Why does man study natural laws—why does he seek to discover their secrets, if is not to appropriate them to his wants? If not that, what would this knowledge serve him? It is, therefore, useful to know that varieties cannot be perpetuated. For man knowing that, utilises the means Nature offers him to regenerate varieties and ameliorate races.

"This is what has already been done instinctively, unconsciously, for the Potato and for fruit trees, and is done daily in all the branches of horticulture.—Jean Sisley."

JOTTINGS ON LAST YEAR'S GARDENING.

The year 1874 will ever be memorable in horticultural annals, Mr. Hunter having grown and exhibited a bunch of Black Hamburgh Grapes weighing 21 lbs. 12 ozs, the greatest triumph in Grape-growing achieved in this or any country. All honour to Mr. Hunter, his name will continue on the page of horticultural history to the end of time. Had the feat been accomplished by any large-bunching kind, as, for instance, the Syrian, little indeed would have been the wonder, for had not Mr. Speechly at Welbeck in 1781 grown a bunch of Syrian to the weight of 19½ lbs.? Prodigies, it appears, in Grape-growing occur about once in a century. Speechly's 19½-lbs. bunch of Syrian has been described as a monster of a comparatively inferior kind. And what is a 19½-lbs. bunch of Syrian as compared with what it does grow to in Syria? A mere fleabite indeed if the figurative ideal given of the spies laden with the fruits of Canaan be at all faithful; a cluster of Grapes being a load for two men. Ideals of this kind have yet to be realised, and we certainly are advancing towards it, for Speechly's 19½-lbs. bunch is so far outstripped by a bunch of Syrian grown and exhibited by Mr. Dickson in 1872, weighing over 21 lbs.—a clear advance in very nearly a century of 1½ lb. The following year (1873), Mr. Hunter advances to the front. Four pounds is a good weight for a bunch of Black Hamburgh Grapes up to that date, but he grows and exhibits a bunch of this kind weighing 13 lbs. 2 ozs.; and in 1874 raises the weight of a bunch of Black Hamburgh Grapes to, as before stated, 21 lbs. 12 ozs. The *modus operandi* by which such bunches are produced will, no doubt, never be told. Seeking to find it, as some have striven to, by insinuations of its being due to adroitness in adding bunch to bunch by experts at grafting, has not been attended with result other than disfavour; spurned, indeed, by every gardener of Anglo-Saxon origin throughout the world. Condescend to such knavish tricks they do not; acting openly, not placing their light under a bushel, but upon the exhibition table, subjecting the products of their skill and industry to the world's light of criticism.

Beyond the grand "output" of the Lambton Castle bunch of Black Hamburgh Grapes, 1874 were the least remarkable, horticulturally, of its predecessors. No introduction of extraordinary note of plant or fruit has taken place. There has been no innovation of any system, subject, or thing calculated to turn horticulturists off the track they have hitherto pursued, otherwise much to spur them on in that they have been so successful by in years past, and only one by which it is to be expected in those to come.

Culturally the Royal Agricultural Society has, to its own satisfaction no doubt, proved there are no kinds of disease-proof Potato. It is hoped the public, and especially the ninety-four essayists, will be convinced that the prize of Earl Cathcart was justifiably withheld. Singular indeed would have been any other result by subjecting any kind of Potato to the culture practised by a majority of agriculturists. Expect to find disease-proof Potatoes, forsooth, following the treatment most calculated to produce it, which none know so well how to effect and compass as farmers. Certain kinds were not, I suppose, submitted for trial as disease-proof, cultivated upon a system most conducive of disease, its propagation and therefore continuance; but certain kinds were named by "several of the essayists" as disease-resisting when cultivated upon the system propounded by the essayists, the object of which is to prevent the Potato plant attaining growth favourable to attack by the fungus. Culturally as well as by disease-resisting type of haulm, the Potato disease may, and will, be rooted out. Never will it be until there is a radical change in the system of culture. There will be no change amongst the great producers until it is by public opinion forced upon them. Another Potato famine would do more to remove the cloud than ninety-four multiplied into itself of essays. It would be more convincing than seeking to provoke by a liberal prize an antidote for the disease, and apply it in such a manner as destroy its efficacy—administer the antidote as the patient shall dictate, ignoring the precise instructions of the physician. Who would think to cure a patient of a complaint induced by stimulants by prescribing their continuance? Instead of arresting the disease, it would be the best possible means to adopt with a view to a fatal issue.

Respecting the other issue of the Potato essays, the life history of the Potato fungus, we are encouraged by the statement that the resting places of the oospores is likely to be settled. Granted, they are found on the Potato, or on the soil, or existed on plants of some kind. What then? A solution for dipping the sets in prior to planting, an application to the land of mineral substance, with avoidance or riddance of certain plants, and maybe districts, will be suggested; and there it will, I have no doubt, all be found in the essays, so that practically we shall know as much as the essays would have given us at a much earlier date. Climatal conditions inducing to disease over which the cultivator has no direct or certain control are not to be ignored, nor could they well be in any essay otherwise than alluded to, for if the cultivator may not change the climate, it is his to adopt such precautionary measures in advance, as well as at the time of attack, as will lessen the virulence of the disease and stay its progress.

Everybody knows all this and much more, but the agricultural mind is so wedded to its own ideas as not to admit any innovation from without, believing themselves ruined beforehand by everything intended for their good, and receiving no change of ideas until altered circumstances forcibly put upon them cause them to do so, in the end finding themselves and others every way benefited.

If the Royal Agricultural Society is not to be congratulated upon finding disease-proof Potatoes, the country has cause for thankfulness in the comparative freedom of the Potato crop from disease, giving it less need of bread, and less dependant upon foreign supplies.

The season 1874 was a dry one, but favourable upon the whole to most descriptions of crop. The hay crop light, but secured in good condition. A light hay crop is a certainty of the early part of the summer having been dry. Grain crops upon the whole good, but Beans may be set down a failure. Root crops were upon the whole good, and yet there were some partial failures through drought.

The season was not remarkable for great heat, though it was 91° in the shade, but nevertheless warm and dry; and the warmth and congeniality of autumn were remarkable, being continued until late in November, when we had cold and snow, and that ever since. Christmas week was bitterly cold, reaching its climax on the evening of the 29th and morning of the 30th December, when the temperature (in Yorkshire) was at 6°, or 26° of frost.

Spring fine and dry but with sharp frosts at night in April and May, the early part of June being very cold and did much injury in some places, especially to Pears. Ours were in blossom and had the flowers destroyed. Early Potatoes had their tops blackened by the frosts of April and May, and some damage done to fruit blossom, especially to Apples. The crops of fruit upon the whole good, Pears and Apricots with Plums being a good crop. Apples were in some places good, and in others indifferent. Bush fruit, excepting Black Currants, was

good, Raspberries being inferior in size and maggotty. Black Currants were very inferior in crop and quality. Nuts abundant, and wild fruit unusually so, Brambles especially, hanging in clusters not unlike Grapes. The Scarlet-berried Elder was particularly fine, and the common Elder plentifully fruited. Mountain Ash bore in plenitude its attractive berries, and the quantity of heps on the Sweet Briar enormous, rendering them beautiful objects in contrast with the snow of December. Cotoneaster microphylla was resplendent with its coral beads upon its deep shining green-setting; C. Simmonsi, though having larger berries, and being more or less plentiful, are not nearly so effective as those of C. microphylla, from the leaves of C. Simmonsi becoming partly bare, it at best being only partially evergreen. It is fine, however, for cutting for decorative purposes, its orange fruit having a fine effect. For cutting, however, no berried plant is equal to the Euonymus europæus var., their opening capsules being very beautiful; they are, however, soon over. Berberis (Mahonia) aquifolia fruited very freely, as also B. Darwinii, but the fruit of these though very profuse is not nearly so beautiful as that of the common Berberry, or B. dulcis. The fruit of the common kind, B. vulgaris, and its white and yellow-fruited varieties, are very ornamental in early autumn. Sloes plentiful, but Crabs were thinner than usual, though the Siberian was heavily loaded, and what a beautiful object it is with its highly-coloured fruit! Haws were not abundant, and Holly is often much more heavily loaded with its berries, which gives it its charm for Christmas decorations. The fruit of the wild Raspberry was not nearly so fine as I have known it, and it is plentiful in the woods here, having unquestionably been sown by birds, to whose agency is to be attributed the springing-up everywhere of Currant and Gooseberry bushes, especially in the vicinity of the kitchen garden. Guelder Rose is not sparing of its berries, but they are not attractive; and though we have no finer object in the landscape in spring than the gorgeous bloom of the Bird Cherry (Cerasus padus), it fruits very sparingly. Aucubas do not berry from the circumstance of quadrupeds stumping them, otherwise they are very beautiful. I might linger over the berries of the Portugal and common Laurel, also Yew and many others, not omitting the beautiful Skimmia japonica, which is of no use whatever where there is hare or rabbit, only to afford them a dainty morsel; and there are the Gaultherias and many other berry or fruit-producing plants, all of greater or lesser beauty; and the reason I allude to them is to point the beauty they impart to woodlands, yea, and ornamental grounds too, when the flowers are becoming scarcer day by day, and the yellow falling leaves acquaint us of the sealing of vegetation in winter's embrace.

Those berries and fruits, what do they remind me of? They cause the mind to picture in its eye the richness of the spring tide of promise. The landscape all aglow with the bright golden yellow of the Whin and Broom, the snowy whiteness of the Blackthorn, the Bird Cherry heightened in effect by the delicate tinting of the Crab, remind of the time of blossom and flowers —Nature's promise of future benefits. They remind of the time of the singing of birds, without which the woodland, the field, the garden is without its amplitude of charm. Well may the birds sing. Instinctively they love to sing amid flowers. The drier the atmosphere the clearer their note; yea, they sing as the promise is of a rich full crop of fruit. If there are none of these berried shrubs, fruit-bearing trees, the landscape is a barren one in spring and autumn—a wilderness that knows only the note of the solitary birds.

Berries and fruits tell us of the provision Nature has made for the recipients of its bounty. The birds, whose songs all delight to hear, will be spared to us over a severe winter to gladden us with their song again in spring. Yes, if birds are wanted provide those for them upon which they subsist. It is futile to plant fruit or berry-bearing plants and not expect to have birds, and equally puerile to expect birds to sing sweetly in spring, to busy themselves in destroying slugs, worms, grubs, beetles, caterpillars, moths, butterflies, and swarms of lice—one, other, or all blighting more or less the hope of the husbandman and of the birds—and not calculate that they will help themselves to the fruit. What are the poor creatures to live upon when the juicy insect food fails? Are they to keep the trees free of the grubs at the roots, and the caterpillars and lice of the head, without hope of reward? Instinct, setting aside reason, point they ought not; but as the fruit of the garden is for more rational beings, let us not forget that the labourer is worthy of his hire. Let no one be so selfish as to delight in the song of birds, admit his help when no harm is done, but when the harvest arrives deprive the birds of their share. I do not mean admit them to the fruit unrestrained, for this would be instinct governing reason; nor destroy them, for that would be to deprive us of their song, and the further use they will be in destroying insects. But whilst we prevent them of the fruits of the garden by nets, provide for them in the ornamental grounds shrubs and trees that produce fruit or berry, to them a substitute for the fruits of the garden. Upon these grounds I advocate fruit and berried plants.

If the berried and fruit-bearing plants are beautiful in themselves, in spring covered with blossom, and laden with fruit in autumn; if birds are attracted by them, being most abundant in and near gardens, and orchards, farmyards, and vineyards, plant such things, the wild fruits of our land, for our native and migratory songsters.—G. Abbey.

CHANGING THE COLOUR OF FLOWERS.

If flowers naturally coloured violet are exposed to the smoke of a cigar, they are observed to change colour and assume a green hue, which is more pronounced the more intense the original colour. This effect may be had—*e.g.*, with the Thlaspi Violet, or Iberis umbellata, and the Julian, or Hesperis matronalis. The change is due to ammonia in the tobacco. Starting from this phenomenon, an Italian Professor (M. Gabba) has made a number of experiments to ascertain the changes produced by ammonia in the colours of different flowers. His method was to put a little ammoniacal solution in a basin, and place a receiver over it containing the flower. In this way he found blue, violet, and purple flowers became green, carmine-red flowers black, white flowers yellow, &c. The most singular changes were presented by flowers in which several tints are combined; the red lines change to green, the white to yellow, and so on. Another remarkable example is that of Fuchsias with white and red flowers, which the ammonia changed to yellow, blue, and green. After the flowers have undergone these changes, if they are placed in pure water they retain their new coloration several hours, then gradually resume their original hue. Another observation by M. Gabba is, that the flowers of the Aster, which are naturally inodorous, acquire an agreeable aromatic odour under the influence of ammonia. They change from violet to red when moistened with dilute nitric acid. On the other hand, if enclosed in a wooden case where they are exposed to vapours of hydrochloric acid, they assume in six hours a beautiful carmine red, which they retain when placed in a dry and shaded place, after being dried in the air and in darkness.

[The above extract has been sent to us with a query whether we know of any other changes to be effected in a flower's colour. We know that many may be rendered white by submitting them to the fumes of burning sulphur. We were told by an amateur gardener that he had rendered the flowers of the Primrose purplish by growing the plants in cow dung. Can any of our readers inform us of such changes of colour induced by applications to the roots of growing plants?—Eds.]

DEATH OF MR. JOHN GIBSON.

Horticulture has lost one of its brightest ornaments in the death of Mr. John Gibson, late Superintendent of Hyde Park, and formerly of Battersea and Victoria Parks. He died after a long and lingering illness on the morning of Monday last at half-past five.

Mr. Gibson's father was gardener to Sir Edmund Antrobus at Eaton Hall, Congleton, in Cheshire, where the son was born in 1815. He has, therefore, finished his course at the comparatively early age of fifty-nine. Mr. Gibson's gardening career began with his father, but in 1832 he was apprenticed to Mr. (afterwards Sir Joseph) Paxton, then gardener to the Duke of Devonshire at Chatsworth. Such were the progress he made, and the characteristics he exhibited, that he was commissioned by the Duke to proceed to India as a collector of plants, and especially to bring home living specimens of the famed Amherstia nobilis. The success which attended his efforts is well known; the Amherstia was introduced, and flowers of that gorgeous tree have occasionally been exhibited at flower shows; and along with it some of the finest Orchids which now grace our plant houses and exhibitions. Of these we may merely mention Dendrobium Devonianum, Gibsoni,

Paxtoni, densiflorum, Cambridgeanum and formosum, Anæctochilus setaceus, Vanda teres, Saccolabium denticulatum, Camarotis purpurea, Cœlogyne Gardneriana, &c.

Mr. Gibson left Chatsworth in 1849 to take the superintendence of Victoria Park, and subsequently of Greenwich Park, and when in 1858 the planting of Battersea Park was begun he was transferred to take the management and direction of a work with which by the admirable way in which it was executed his name will always be associated. Battersea Park is now beginning to develope its beauties, the planting so skilfully managed is producing its effects, and becoming, as every returning year rolls by, a more impressive monument of him who executed it. It is to Mr. Gibson that, while at Battersea Park, subtropical gardening was carried out with such successful results, and which has tended to alter and improve the monotony which so long prevailed in our flower gardens and dressed grounds.

In 1871 Mr. Gibson accepted the appointment of Superintendent of Hyde Park and Kensington Gardens, vacated by the death of the late Mr. J. Mann. Some months ago he was stricken with paralysis, which incapacitated him for his office, which is now filled by his son; and as a mark of sympathy for him in his affliction, and a tribute to the estimation in which he was held, a handsome testimonial in money was presented to him by those who loved him as a friend and admired him as a man.

EXHIBITION AT ANTWERP.

There is to be a Jubilee Fête at Antwerp on the 4th, 5th, 6th, and 7th of April on the occasion of the 125th Horticultural Exhibition of the Royal Horticultural and Agricultural Société of Antwerp. It is to consist of horticultural products and objects of art, tools, and implements relating to horticulture. The schedule is a liberal one, and the large prizes, which range as high as £16, may be taken either in medals or in money.

THE LATE MR. C. NORVAL THOMPSON.

We have had numerous inquiries from readers of this Journal to know if any steps are being taken to relieve the necessities of the widow and orphans of the late Mr. Thompson. We are happy to say that a movement is being organised and will speedily be announced. We commend this case most heartily to the charitable and benevolent, and trust that they will help in their hour of need the bereaved family of one whose object in life was to do his duty and to minister to the wants of others according to his ability. The Editors of this Journal will be happy to receive subscriptions in the meantime, till an organisation is formed; and let us remind our readers of the proverb, "He gives twice who gives quickly."

ARCHERFIELD.—No. 2.

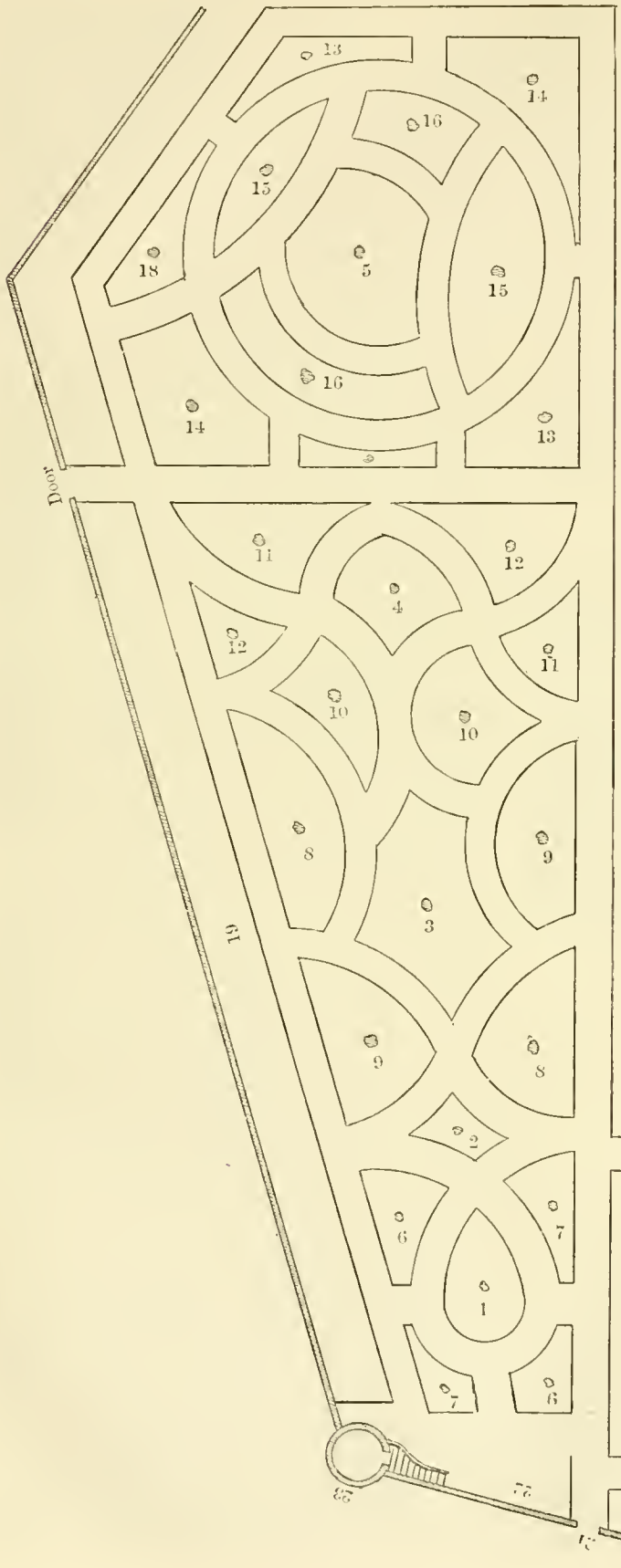
THE SEAT OF THE RIGHT HON. R. A. NISBET HAMILTON.

DIRLETON GARDENS.

Any notice of the gardens of Mr. Hamilton would be incomplete without an allusion to the castle enclosure. Here the archæologist and horticulturist may revel; the one in the ruins of the massive pile, and the reflections of the life, habits, and turmoil of the remote past; the other in the glowing beauty of the modern flower garden, the conscious quiet security, the peace and repose of the present. Such a place as this is a standing, tangible, incontrovertible example of the advancement of civilisation, the refinement of manners, the improvement of habit, morals, law. It tells us as plain as stones can speak that once might was the rule of right, and force the soul of law; and it tells us not less clearly in the pure soft breathings in which flowers ever appeal, that conflict and turmoil have departed from the scene, and that order, immunity from strife, intellectual pleasures, and an ennobled taste reign in its stead. We may cherish the memory of the prowess and deeds of daring of our forefathers, and linger over their recital as "o'er a tale of love;" but let us not regret they are alien to this age of ours, or repine that the nation is less masculine than of yore, for such is but an empty fear and groundless notion. Encroach but on our honour, our liberty, or rights, and, in obedience to duty, the martial spirit and latent courage of the race comes out anew, and is still untarnished by an epoch of peace. But a greater triumph than the combats of the past is the triumph of the present over the passions of men; the physical has succumbed to the intellectual, leaving, however, the *physique* unimpaired. That is a triumph to be proud of. How has it been won? By appeals to the higher faculties; by education in its different phases as religious, political, artistical. When will the unobtrusive plodding brainworkers who are moulding the national mind in all that makes a nation truly great and good, when will they have a due meed of national honour and encouragement? We give to our men of war swords, and statues, and medals, and none begrudges them their reward; but when will the pioneers of peace, of home comforts, and prosperity—the tutors of a right-respecting, law-abiding people—when will they have the same meed of correlative and commensurate reward meted? Well, the time is coming. Music and painting and the sister arts have honourable recognition in their skilled representatives—even horseracing has royal patronage; but has not horticulture done, and is doing, something to elevate the national taste? Is not the practical skill that spreads such a feast of pure enjoyment in the public parks and gardens of the land worthy of a tangible tribute of public appreciation? Ought not those who open the gates of their private homes to recreate the masses—ought not they to have what they merit, something more than a few casual words of approval? Is it too much to expect that those who spend their days and nights of mental labour seeking to evolve that which will benefit their fellows—nay, that which has benefited by the instrumentality of garden literature, which has been so powerful, so potent, so beneficent in its results—is it too much to expect that this great educator will one day have some crumbs of recognition which can well be spared from the tables heaped-up in honour of the civilisation of the sword? There is, however, the reward of an appreciative people, and herein is the very proof of the higher tastes, the improved sentiments, of the present over the past.

These thoughts had birth at Dirleton, and are such which could hardly fail to occur to any reflective mind. There is the past on one hand in the magnificent ruin, with the remains still visible of its moated barrier and protective portcullis, its ponderous masonry, outlooks, and dungeons—all savour of war. There, on the other hand, is the present—the bright smiling flowers, the luxuries of lawn and shade, free for the enjoyment of hosts of admirers who flock to the feast of nature and of art. Here, side by side, is the ancient and modern, the memories of war and the fruits of peace. We cannot see these without reflecting on the agencies producing them, neither would we if we could.

We may dwell for a moment on an outline history of this grand old relic of feudal times, of which much has been written. An authority says that the Anglo-Norman family of De Vallibus or De Vaux obtained a grant of the Manor of Dirleton. In 1298 De Vaux's castle was besieged by Antony Beck, the marshal Bishop of Durham, on behalf of Edward I., to whom, after a desperate resistance it surrendered. Eventually we find the estate in possession of Sir Walter Halyburton, who, marrying the daughter of the Regent Albany, was created Lord Dirleton. The eldest daughter of the sixth Lord Dirleton carried the estate into the Ruthven family, and was included in the forfeiture, and bestowed by the King on Sir T. Erskine, who was in turn created Baron Dirleton. In the civil wars the castle was occupied by the Scottish guerillas, known as Moss Troopers, and who surrendered to Monk in 1650. After the Restoration it became the property of Sir John Nisbet, from whom it has descended to its present owner, Mr. Nisbet Hamilton, who uses every care that the interesting pile shall be preserved in its pristine beauty to generations to follow. It is repaired with great taste, and the cleanliness of its rude interior betoken the oversight of owners worthy of being trusted with the keeping of this grand old memorial of the past. Sir Walter Scott in his "Border Antiquities" states that this castle and estate was the bribe which the last unhappy Earl of Gowrie held out to the cupidity of Logan, his associate in conspiracy. It seems to have been coveted by that person in the highest degree. "I care not," says Logan in his correspondence, "for all the other land in the kingdom if I may grip of Dirleton, for I esteem it the pleasantest dwelling in Scotland." "We know not," says another writer, "a more lovely scene than is presented by this village, with its fine green, its noble pile of Ivy-clad ruins, and the distant rock-gemmed firth." This village green is a fine expanse of turf, bounded on one side by the castle enclosure, and around which the cottages are scattered, each in its own garden plot. In architecture these are plainly ornamental, and tell one on the



PLANTING.

1, Dwarf Ageratum and Polemonium mixed, edge Crimson King Verbena.

2, Purple King, edge Mesembryanthemum cordifolium variegatum.

3, Yellow Calceolaria, band of Dell's Beet, band of Artemisia, edge Lobelia.

4, Bronze Pelargonium, band Purple King, edge Alyssum.

5, Pelargonium Stella, band Christine, edge dwarf Ageratum

6, Pelargonium Golden Chain, edge Lobelia.

7, Pelargonium Flower of Spring, edge dwarf Ageratum.

8, Purple Stock and Artemisia.

9, Pelargonium Christine, edge Verbena.

10, Pelargonium Trentham Rose, edge Nepeta teucrifolia.

11, Dactylis and Purple King mixed, edge Golden Feather.

12, Pelargonium Little David, edge Cerastium.

13, Yellow Calceolaria, edge Iresine Herbstii.

14, Pelargonium Vesuvius, edge Alyssum and Lobelia mixed.

15, Pelargonium Bijou and Verbena venosa mixed.

16, Dark Calceolaria, band of Chrysanthemum Sensation, edge Tropæolum Cooperi.

17, Viola Perfection, edge Viola White Perfection.

18, Pelargonium Crystal Palace Gem, edge double Lobelia.

19, Border by wall.

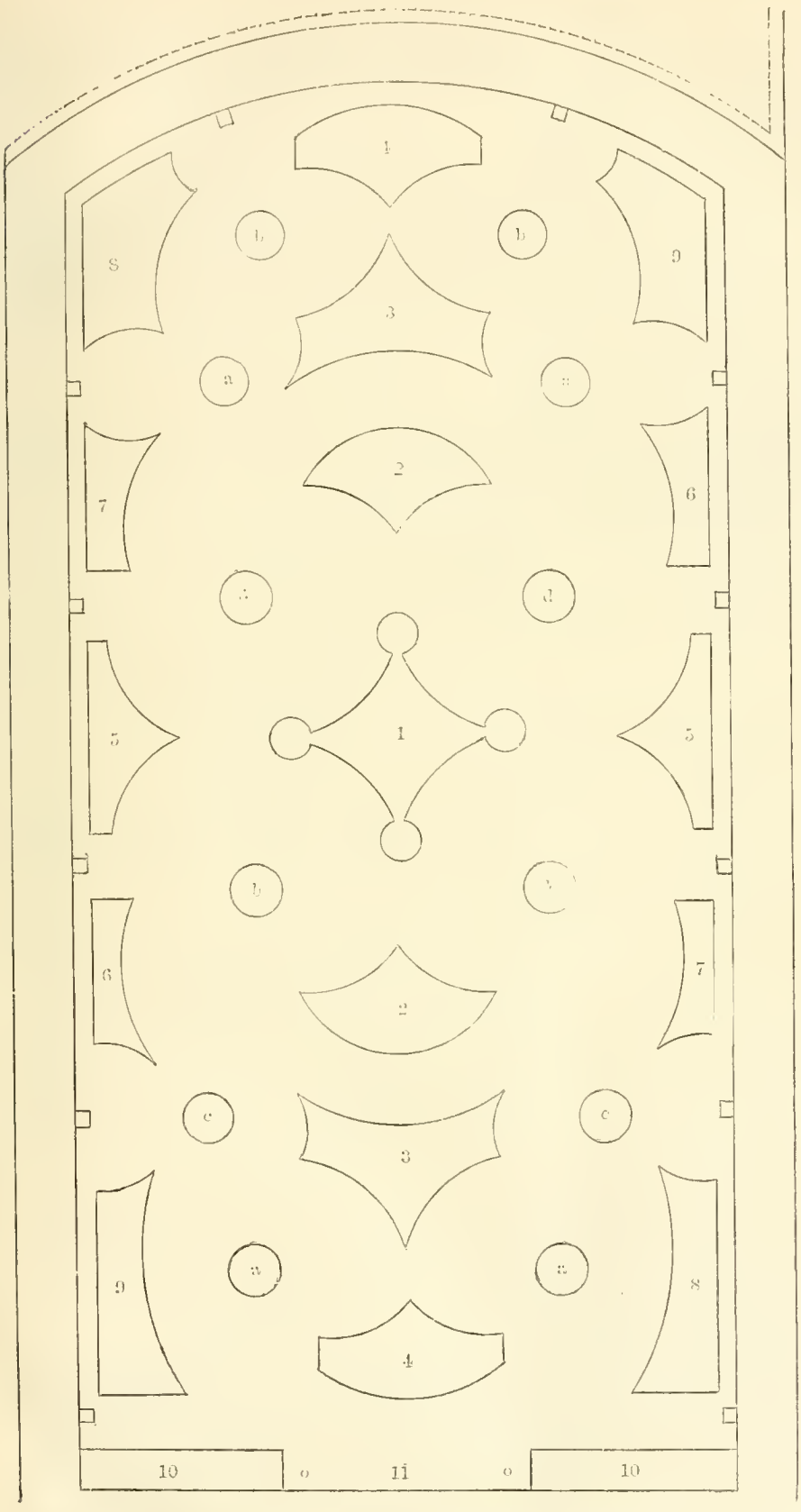
20, Ornamental-foliaged plants.

21, Entrance.

22, Palms.

23, Tower.

Fig. 8.—On gravel.



PLANTING AND ARRANGEMENT.

SMALL CIRCLES.

a, *a*, *a*, *a*, Four Araucarias.

b, *b*, *b*, *b*, Four Irish Yews, large.

c, *c*, Two Cupressus Lawsoniana,

d, *d*, Two Cedrus Deodara.

□, Twelve vases, 2½ feet high.

o, o (recess), Two large vases, 4½ feet high.

BEDS.

1, Clematis Jackmanni; edge Euonymus radicans.

2, 2, Groundwork Saponaria calabrica, with Ricinus and Cannas dotted in.

3, 3, Perilla with 3½-feet plants of Acer Negundo variegata dotted in.

4 4, Clematis Jackmanni; edge Gnaphalium lanatum

5, 5, Groundwork Sempervivums of sorts. Raised plants, Agaves, Yuccas, and Chamæpeuce; edge Echeveria secunda glauca.

6 6, Abutilon Thompsoni and Iresine Herbsti; edge Kleinia repens.

7, 7, Groundwork Echeveria abyssinica. Raised plants, Solanum macrantherum; edge Iresine Lindeni.

8, 8, Groundwork Echeveria metallica. Raised plants, Coprosma Baueriana variegata; edge Mesembryanthemum cordifolium variegatam.

9, 9, Groundwork Echeveria secunda glauca. Raised (large) plants, Sempervivum Youngianum; edge Mesembryanthemum cordifolium variegatum.

10, 10, Hedge.

11, Recess cut in hedge.

Fig. 9.—Grass garden.

face of them that the comforts of the inmates are considered. It is striking to a southener to find the old Fuchsia Riccartonii growing up to the eaves, pruned each winter like Vines, and blooming each summer in elegant profusion. Yes, indeed, this is a pleasant place, and salubrious, a covering of snow being seldom seen, and 12° of frost not often exceeded.

But it is time we look in the flower garden. It is bounded by a massive wall, and entered by a door at, I think, the north-west corner. On entering is a burst of beauty. Straight ahead is an irregular strip—an outside slice, as it were, of the grounds, laid out in beds on gravel. These beds are of considerable size, varying from 30 to 60 feet over. They were one grand dense mass of bloom; no "enamelling" or anything of that kind, but light or glowing masses of colour. The gravel paths, being 9 to 10 feet wide, permit of easy promenade by the hundreds of visitors. In fact, there is room to enjoy the feast in comfort. These broad paths and large beds were an idea well carried out by Mr. D. Thomson, who must have had no small difficulty in fitting a suitable plan to a site so irregularly bounded. Its mere copying was a "take-in," but it is given as nearly accurate as possible. Each bed had a centre shrub of choice variety, or a pyramidal trellis of Clematis, Nasturtium, &c., which are a pleasing relief to the general flatness of the garden. This garden is about 360 feet in length, and the view from the tower at one end, and the abrupt rising ground, the castle mound, on the other, is a sight worth seeing. It is bounded on the right by a Yew hedge, and on the left by the boundary wall. By the tower is planted a plant of Wistaria sinensis, covering a length of wall of 220 feet, a noble plant, which blooms profusely. The rest of the wall is covered with the best varieties of Clematis. The long border is planted in squares, relieved by Irish Yews and variegated Maples at intervals. It is not necessary to dwell on the planting; suffice it to say the high colours were very telling, and the mixtures chastely effective, all being well filled and finished.

But there is another flower garden on grass in this enclosure, at right angles with the one on gravel—that is, on entering, the gravel garden is straight ahead, and the grass garden stretching away to the right. This latter is about 170 feet long by 100 feet wide. It is not nearly so brilliant, but is fully as interesting as the former garden. The one is expressive of past active life, the other of cool, quiet repose. The one intoxicates, the other soothes and sobers the mind. The plan of this garden is exceedingly plain, and like most plain designs is exceedingly effective. Beautiful and healthy specimens of Conifers are here introduced, and the beds are mostly filled with succulent and fine-foliaged plants. There are, however, some flowers, notably the centre bed, which for richness without glare is not easy to surpass. It is a diamond-shaped bed with circles at the four points. In the centre is a tall shrub, and in the four circles lower ones. It is edged with Euonymus radicans, and planted closely with Clematis Jackmannii in rich soil. The Clematis was permitted to climb over and cover the shrubs. It was a pyramid of impenetrable bloom, some of the individual flowers being 5 inches in diameter. This is a fine flower anywhere—on walls, trellis, or roots; but to see it in all its glory, treat it as treated here, and rejoice. It put all the beds in the place into the shade. It was the first in bloom and the last out. It was something to be proud of, a credit to the man who grew it, and an honour to him who raised the plant. The bed was 35 feet over, and 8 to 10 feet high at the centre point. This garden is adorned by twelve vases. The beds need not be further described, a plan being appended. It is easily adaptable to a place large or small, and is a nice example of the systematic and harmonious arrangement of shrubs, vases, and flowers. The old castle is quite hid from these flower gardens by large trees. In the centre of these is a sunken bowling-green for the amusement of visitors. Altogether this enclosure is a charming place, a retreat full of interest and beauty. On one day a-week it is open to all who appreciate the privilege, by enjoying without molesting. The place is in perfect order of cleanliness and good keeping, every necessary being allowed by the owner, and ably applied by the gardener. It lacks one thing. A mixed garden of old, hardy, herbaceous plants would be singularly appropriate within its confines. But it must be admitted that room for this is not easy to find, and to remove a single feature from such a place is an idea not to be lightly entertained.

Without entering further into particularities, it may be said generally and without reserve, that Archerfield and Dirleton are good and well-managed gardens in the several departments. To Mr. Kettles I am indebted for much courtesy and hospitality, and to him and his kind helpmate I owe thanks for the first real rest (after a long, dark, tiresome journey), "over the border."—J. Wright.

A GARDEN OF HERBS.

By A. E. Barr.

The Greeks had a proverb, "Many worts and pot herbs in Syria," though Syria was only the heir of Babylonia, whose priests knew well the hidden virtues of herbs, and gathered many of them with magical observations, the traces of which remain in northern Europe unto this day. Certain it is that on this subject we are not the people with whom wisdom was born, and equally certain that much of the wisdom of the ancients died with them, or has come to us only as the bare tradition of a forgotten lore. I need but name

> "the sweet balsamic oil
> Which wept from herbs in Juda's fertile soil;"

the balm that Jacob thought a noble present for the royal Pharaoh, the plants of which were so precious that Pompey, Titus, and Vespasian all boasted of having brought one or more to Rome. Josephus says that in his day Gilead had become exhausted, and that the royal garden of Balm was near Jericho. This garden, on their downfall, the Jews attempted to destroy, but were prevented: and henceforward the precious herbs shed their fragrant gum for heathen deities and the odaliques of the Turkish seraglios. Now the very plant cannot be certainly identified—it has become simply "a name to conjure with"—a password for the nostrums of quack and impostors.

Of a very different spirit was the herb Basil. The Romans sowed it with maledictions, and while they trod it down with their feet, forbade it to grow, averring that, so contradictious was its temper, it always did best what it was forbidden to do. In Mary's and Elizabeth's reign a pot of Basil was considered a compliment to any lady, but remembering its peculiar habits, it is just possible the compliment was a covert sarcasm. No plant has had so bad and so good a name. Old Gerarde greatly praises it, and says, "It is good for the heart and the head, and taketh away sorrowfulness which cometh of melancholie." Tusser has a little sneer for its dainty tastes; and again, Lord Bacon commendeth its "fat and succulent leaves," which are yet such favourites with the French that none of their soups or sauces want the aromatic fragrance of Sweet Basil.

"Why should a man die who has Sage in his garden?" was a popular saying of Campania: for greatly was this herb valued for its healing qualities, and its power to strengthen the memory and induce wise thoughts. It has still some reputation as an emollient, and I saw instances during the late war when the leaves dried and smoked in a pipe greatly allayed that irritability common to men deprived of their customary tobacco. I would not speak positively as to the "wise thoughts," but I know the words were more reasonable after it. The Chinese are immoderately fond of Sage tea: and the early Dutch traders there drove an excellent bargain on this basis: 4 lbs. of best Young Hyson for 1 lb. of dried Sage leaves. In England, until within the last century, it was frequently mixed with cheese. Thus Gay writes:

> "Marbled with Sage the hard'ning cheese she pressed."

Within my own memory it was eaten with bread and butter or chopped fine and baked between rich pastry. Toads have a strong passion for it, therefore it is customary to plant among the Sage bushes a little Rue, a herb specially distasteful to them.

> "'Here's *Rue* for thee,' the poor Ophelia cried."

Rue, which Shakespeare calls,

> "sour herb of grace,
> Rue, even for ruth;"

and makes it grow where a wronged queen has dropped a tear. I think he is a little unjust. Rue has a record which deserves more honourable mention. Every physician knows that it was the chief ingredient of the famous antidote of Mithridates, the true receipt for which was as follows:—"Two dry Walnut kernels, two Figs, twenty leaves of Rue, one grain of salt, pounded into mass. Whoever eats of this confection, fasting in the morning, no power shall hurt him that day." All the ancients, however, believed that for medical or magical purposes Rue ought to be stolen from a neighbour's garden.

Pliny says that the Romans put this herb into their wine to prevent headache, and that painters and carvers chewed the leaves to preserve their sight. That some faith in its beneficence towards vision existed, even in the seventeenth century, is evident from Milton making the angel Michael purge Adam's eyes "with Euphrasy and Rue" in order to enable him to see down the long centuries of time.

It is said that weasels, before hunting rats, seek for Rue, and that in warm climates they find in it an antidote for the bite of snakes. Whether for its power of antidoting evil, or for that of conferring clearer vision, it received the honour of being used for sprinkling holy water, I do not know. However, in the middle ages that was its religious office. Later on it was used as a powerful disinfectant, and was also made into a pickle, the leaves being first boiled and then preserved in vinegar—the same plant that charmed the bravest King of Pontus, that aromatised the Cæsars' wine, and gave insight to Grecian sibyls—the same, "but oh! how different!"

Perdita, in the *Winter's Tale*, beautifully mingles Rue with Rosemary, thus:

> "For you, there's Rosemary and Rue: these keep
> Seeming and savour all the winter long.
> Grace and remembrance be with you both."

And the fair Ophelia also uses the fragrant, dainty Rosemary in the same manner:

> "There's Rosemary for you; that's for remembrance:
> Pray you, love, remember."

The accepted type of fidelity in love and friendship, it was (and is yet in some places), the favourite funeral flower, the very best gift of love to the departed, placed upon the lips just before the coffin-lid is closed. To this custom Kirke White pathetically alludes while contemplating his own early death:

> "Come, funeral flower, who loveat to dwell
> With the pale corse in lonely tomb
> And throw across the desert gloom
> A sweet decaying smell.
> Come, press my lips and lie with me
> Beneath the lonely Alder tree;
> And we will sleep a pleasant sleep.
> And not a care shall dare intrude,
> To break the marble solitude,
> So peaceful and so deep."

Rosemary has been a favourite subject with many English poets, particularly Herrick and Shenstone. It is very partial to gardens over which sea breezes blow, and I have seen cliffs which were wet with the spray of high tides covered with this delightful plant, whose fragrance is often the first land perfume that greets the homeward-bound. I am astonished that Rosemary (Dew of the Sea) is not a greater favourite with married ladies: for it is a universal tradition "If Rosemary flourishes in the garden, then the lady rules the house." And how do we know what occult power is hidden in a sprig of Rosemary? Surely it is a fair and fragrant sceptre. Bees are exceedingly fond of Rosemary, and the far-famed honey of Narbonne derives its exquisite flavour from the abundance of this herb in the vicinity.

Rucellai says that Nature made Thyme on purpose for bees to make honey of. If so, they improve her gifts much better than we do God's best gifts to us. The famous honey of Thymettus was not only the extract of its fragrant Thyme banks, but the condensation of Grecian sunshine, of cloudless skies, and heavenly atmospheres. Bees are not the only lovers of Thyme.

> "Where the wild Thyme perfumes the purple heath,
> Long loitering there the fleecy tribes extend."

The Thyme banks of the Cheviot Hills are the secret of the Cheviot mutton; and the celebrated Southdown—a saddle of which is a dish to be named with respect—owes its delicate excellence to the same source. In Spain they use a decoction of Thyme to wash out vessels for wine, and the Anglo-Saxon all over the world appreciates its flavour in his soups, ragouts and forcemeats. Thirty years ago it was used instead of box wood for bordering flower beds—an old fashion now, I know, and one I never think of apart from some drowsy, quaint cathedral town—but it would bear transplanting to our fresh modern gardens: for if the borders are kept trimly cut, nothing can be sweeter to the smell or fairer to the sight.

Mint is also a great favourite with bees, and if rubbed with honey inside bee hives it very soon attaches them to a new home. From the story of Baucis and Philemon we are led to infer that the Greek peasants scoured their tables with this herb; and the habit was probably just as common among the Roman farmers, for Pliny says "You will not see a husbandman's board in the country but is all seasoned from one end to the other with Mint;" and he also mentions the custom of putting it in vinegar to eat with meats. Spearmint prevents the coagulation of milk, and is therefore an excellent salad for those who use a milk diet. Another variety, Peppermint, makes a popular confection, and also gives a name to a favourite American beverage composed of Mint, sugar, ice, and brandy. Omitting the last ingredient, we would venture to say it was at least "better than might be."

Surely, there are bitter cups enough in life without mingling them, yet even Wormwood has had its day. It was the "bitters" of the Egyptians and Romans; and if anyone desires to try it instead of "Plantation," here is the receipt: 1 oz. of Wormwood, 3 scruples of Arabian gum, 3 scruples of Spikenard (Lavender), 3 scruples of Saffron, and 180 gallons of old wine." I rather think the proportion of Wormwood to the wine is something after the kind of Falstaff's "halfpenny worth of bread to an intolerable deal of sack." The Greeks dedicated Wormwood to Diana, probably because dogs are great lovers of it, and use it in all their diseases. The English dedicated it to St. John the Baptist, and then, with strange inconsistency, used it (before the discovery of hops) in brewing their ale. Still, its consecration was believed to have made it a potent spell against witches; perhaps it was still more successful against moths and other insects. Nevertheless, the gift of Isis and the plant of Diana is now little more than

> "the fat weed
> That rots itself in ease on Lethe's wharf."

Yet surely there is some significance in herbs, else why has "the Hyssop that springeth out of the wall" been so specially set apart for purifying and propitiatory services? This herb was distinctly ordered to be used in striking the lintels and doorpost with the blood of the Passover lamb. It was prominent in the purifying services for the healed leper, and in the ceremonies for cleansing unholy or unclean places. David, in the very depth of his self-abasement, cries out, "Purge me with Hyssop, and I shall be clean:" and when the Great Atonement was offered for the sins of the world, a sponge filled with vinegar, and lifted upon Hyssop to the lips of the Lamb of God, was the consummating rite of that stupendous sacrifice.

See, then, how

> "the meanest plant that grows can give
> Thoughts that do often lie too deep for tears."

Are there not wayside flowers that consecrate "the fair humanities of old religion," secrets in a weed's plain heart well worth the winning, and homely herbs rich with the spoils of time and nature? Do not fear, then, the lowliness of the subject, for

> "Wisdom is oftentimes nearer when we stoop
> Than when we soar."

—(*Medico-Pharmaceutical Abstract.*)

PROVINCIAL HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

THE DISEASE OF CUCUMBER ROOTS.

Nearly every grower of Cucumber plants is more or less acquainted with the peculiar disease which manifests itself in knots or nodules on their roots. These diseased roots have frequently been sent on to us for examination, and those forwarded last week by Mr. John Platt were so characteristic that to better explain their nature we here illustrate a section of part of one of the smaller nodules. The letter from Mr. Platt in last week's Journal, page 5, well explains the symptoms of the disease, which are, however, well known to most gardeners.

The root-nodules in question are generally assumed to have a fungus origin, but the Rev. M. J. Berkeley long ago described the disease, and showed it to be caused by a parasite of another nature. The description he illustrated with the utmost accuracy. It would seem that the pest which causes the mischief is not always readily seen, or maybe it escapes into the surrounding soil, or, after working the mischief, perishes; but that it is sometimes difficult or even impossible to detect Mr. Berkeley himself confesses. On this account Mr. Berkeley's observation has unfortunately been questioned, but he has quite recently been able to satisfactorily confirm its positive

accuracy in *Gardeners' Chronicle*, Sept. 5, 1874. For our part we have frequently seen the interior of the nodules just in the condition described by Mr. Berkeley, with the parasites in all stages of growth, from the egg condition upwards.

Our illustration represents on the left the diseased roots natural size, and on the right a thin slice through one of the nodules of the roots forwarded by Mr. Platt. The latter is an exact reflection from a camera lucida attached to the microscope, and shows the cellular tissue, A; pitted and spiral vessels, B; the worms coiled up in the eggs, C; worms emerged, D; and empty eggs, E, from which the worms have escaped. Mr. Berkeley refers these parasites to Vibrios, which belong to the infusoria (properly confervoid Algæ), common in fœtid water, &c., and always, we believe, extremely minute in size; but it will be seen from our figure, which is enlarged 160 diameters, that the animals there shown are just over one one-hundredth of an inch long, whilst Vibrios are ten times smaller, and do not arise from eggs, but increase by the formation of new joints and separation at the articulations. The parasite appears to us to belong rather to the oviparous section of the genus Anguillula, which includes the "vinegar eel," and except that it is only one-half the size, it is very similar in all stages of growth to A. Tritici, an eel found infesting blighted wheat.

It is often complained that men of science cannot specify cures for the diseases they describe, but it should always be remembered that in regard to cures pathological botanists considerably resemble doctors of medicine. It does not follow that, because a doctor can tell by certain symptoms his patient may have Asiatic cholera or cancer, that he can therefore cure the disease; or because a fireman sees your house is being

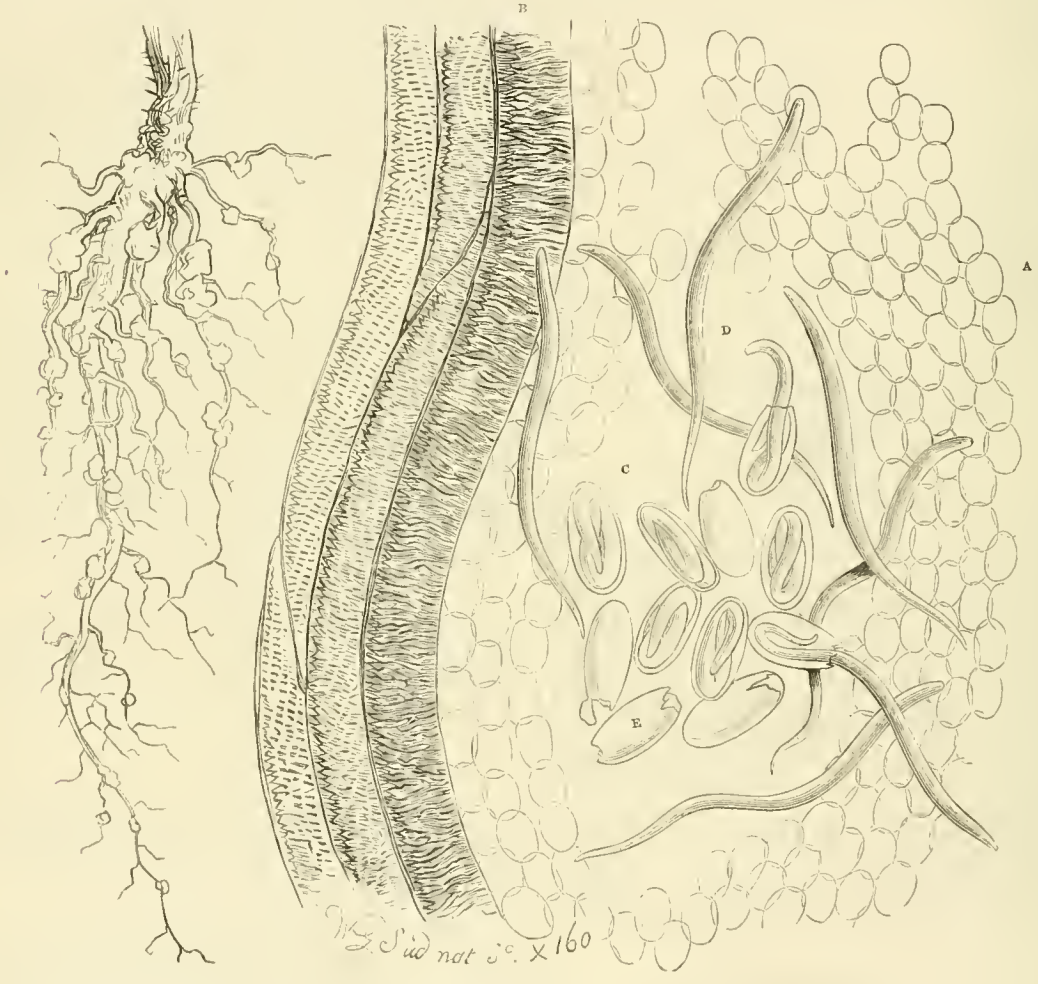


Fig. 10.—The Disease of Cucumber Roots, enlarged 160 diameters.

destroyed by fire, he can from that mere fact extinguish the blaze. Physic and water sometimes do wonderful things, and in the case of worms in the roots of Cucumbers, the best remedy is to destroy the plants and look to the compost, which probably harbours the parasites.—W. G. Smith.

THE ARECA PALM.

The most useful of all the vegetable orders are the Grasses, and next to them the Palms. They supply food, and shelter, and oil, and cordage, and beverage, and writing sheets to millions of easterns, besides many minor luxuries such as those obtained from Areca Catechu, the Areca Palm or Betel-nut Palm.

It is a product of the East Indies and southern China. Its timber is used by the natives; its leafstalks for making ropes; its spathes for wrappers; and the kernels of its nuts, which are harsh and astringent, for masticating. For chewing, a native takes a green leaf of a Betel-pepper, one or other of the genus Chavica, stimulating as its name implies, spreads on it a little moistened quicklime (chunam), and scrapes on to this a little of the Areca nut, folds up the leaf, and it is then ready for chewing. It is commonly called "pawn." All classes indulge in the practice, and practice only can render it endurable, for it is intensely stimulating and injurious to the palate. The Malays carry their Betel or pawn-box as Europeans carry a snuff or tobacco-box, and offer its contents to a friend as a courtesy. The habit may be salutary to a population living on vegetables, for, as Sir Emerson Tennant observed, the compound is antacid, tonic, and carminative. At the same time it is disfiguring, for the mouth and lips are dyed purplish red by the saliva which it colours; and it is so destructive to

the teeth that those of a man at the age of twenty-five are often quite destroyed.

Meyen states that "on all the coasts of the East Indies and the adjacent South Sea Islands, the Philippines, the Carolinas, the Marian, and Society Islands, where chewing the Betel is a more or less common practice, the Areca Palm is planted near the dwellings, where it, in company with the Banana, forms a beautiful object. In the town of Manilla we find the

Fig. 11.—The areca palm.

Betel Palms planted in regular rows before the houses; and Plantains, Anona squamosa, Averrhoa Bilimbi, and other tropical trees grow between them.

"In consequence of the enormous consumption of Betel in the Indian Peninsulas and in China, the Betel nut forms a very extensive branch of traffic. The export of it to China from the Eastern Peninsula and Sumatra is very large. Sumatra furnishes yearly at least between 40,000 and 60,000 pikels (a pikel is 133⅓ lbs. English), which are shipped from May until August. Sumatra together with the adjacent countries, indeed, exports 80,000 or 90,000 pikels annually, which for the most part go to China.

"The Areca Palm, although probably wild only on the Sunda Isles and the adjacent Philippines, is most extensively cultivated not only in Sumatra but in India. In Ceylon, and especially throughout Malabar, and still higher up the coast,

there are vast plantations of this beautiful Palm, and their produce is of great importance, for as everyone chews Betel, the consumption of Areca nuts in India is incredibly great."

NOTES ON VILLA AND SUBURBAN GARDENING.

With the spring dawning upon us, and the weather mild, and the soil comparatively dry and workable, reminds one that it is time for action in many gardening matters. The first of which should claim attention is the sowing of a crop of Peas, and planting a crop of Broad Beans. A warm border should be selected for both, and then, if the weather should not prove too severe, they may be expected to come in for use within a very short time of those sown in November, and with much better results as to produce, arising from the fact that they are reared nearer their proper season of growth. If the ground is not yet ready for the reception of the Peas or Beans they may be very profitably raised under hand-lights, to be afterwards planted out. Both of the above crops, if not improved by transplanting, are certainly not injured by it. It may be as well to mention that, when the soil is very wet and cold and not of the best staple, the Peas would be best sown very shallow and covered over with soil made up for the occasion. This system prevents the seed from rotting, which a wet heavy soil always favours more or less. But it must be borne in mind that, through the seed being sown shallow and the soil bad, the roots will have a tendency to grow but just under the surface; therefore during their growth they must be surface-dressed or mulched to keep them in health and growing order. The Broad Bean is not so particular about soil, as a heavy one if of moderate stability will most likely suit it better than a lighter one. A few Carrots of the Early Horn kind should be sown at once under a frame; if on a bed of heating material so much the better. This ought to be the second crop sown on the same conditions. A small crop should also be sown in the open ground, provided it is in a warm spot and dug. The Long Scarlet Frame Radish, too, may be sown with them. Some people complain of the loss of Cauliflower plants, not only those pricked out under walls, but many of those in hand-lights. When such is the case sow some seed in a frame—or a box no doubt would be more convenient for small gardens; these to be afterwards pricked out on protected borders. They do not generally turn in quite so soon as those sown in autumn, but they do form a good succession, both tender and finer than older plants. The same precaution must be taken with regard to Cabbage, many of which have gone off in the beds.

Now is a very convenient time to make up a hotbed. Perhaps no time is so suitable for the amateur gardener. He can raise so many things by its help. If not wanted for Cucumbers or Melons for a permanency, the young plants can at least be raised in it, to be finally planted elsewhere; and besides that, the general bulk of plants wanted for either department of the garden may be successfully raised in it.

FRUIT GARDEN.

Do not delay the pruning of anything now. Even Peaches, Nectarines, and Apricots must be now done, and especially outdoor Vines, which if left too late are apt to bleed, to their injury for the next season's growth. Orchard trees, or those grown in that fashion in the garden, must be pruned also, which consists in the thinning-out of the old wood and branches where they are thick. Rhubarb in forcing beds must be watched this mild weather, and admit air and light to that fit for use, keeping the succession crops a little closer.

FLOWER GARDEN.

In the flower garden there is not much to do but to trim and dress-up plants and dig the ground. Even the soil in the flower beds will be the better if once more turned over to a good depth. Lay turf during this suitable weather, and make any alterations on the lawn that necessitate the removal of turf. See to the edgings, and in cutting them take care that they are well defined; even a small terrace embankment, if allowed to get out of shape its appearance is spoiled. Take care that the ground is thoroughly rammed, to prevent the sinking of the soil and the unlevel appearance which the lawn will assume if it is not properly done. Admit plenty of air to frames and places containing cool-house plants; and as the bedding Calceolarias are well rooted it would be better to take the point out of every shoot, otherwise they become drawn and almost useless when planted out. All bedding plants that are growing unevenly, the tallest should be pinched back. The same may be said of Verbenas and many other things of the same class.—T. RECORD.

DOINGS OF THE LAST AND PRESENT WEEKS.

FRUIT GARDEN.

SINCE the third day of the present month the thermometer has not fallen lower than 36°, so that the frost is quite out of the ground. The Apple, Pear, Plum, and Cherry trees trained as pyramids and in the bush form had been pruned in the autumn, and needed only to be looked over, and to have any branches that were crowded or crossing each other to be removed. The Cherry trees have been planted ten years, and are furnished from the ground to the tips of the branches with fruit buds. They have grown so large that it is difficult to cover them with nets, and if they are not thoroughly covered-in with strong nets, when the fruit is ripe the birds will risk their lives to get at it. Indeed, it is so difficult to preserve it that we are digging out some of the trees and planting Apples in the place of them. In our shallow gravelly soil trees worked on surface-rooting stocks are the best, and the course of treatment required for them is very different from that given to those which are worked on stocks that send their roots down deeply in the ground and far outwards in search of sustenance. The trees of the latter are planted where they have opportunity to grow to a considerable size; and when they have arrived at the stage of growing crops of fruit, a dressing of manure over the roots and forking it in will in most instances benefit the trees. In light soils the best treatment for trees on a dwarfing stock is to mulch over the roots with rotted manure; cow and horse mixed is better than the latter by itself. Very often the spent dung from a Mushroom house or from a hotbed that may have been overheated is used, but cow manure is the best for light soils, and for heavy soils stable manure should be used by itself. In relaying the Box edgings they were raised a little to allow of a dressing of gravel over the walks without taking any of the old gravel out. This arrangement left the borders in which the fruit trees are planted a little lower; and the way we have done this year has been to give the surface of the borders a good dressing with manure, and then to cover this over with soil that had been dug out to renew the vinery borders. If this had not been done the soil would have to be wheeled out, and then carted away where it would be of little value. When the trees were planted the union of the graft with the stock was not covered: the present dressing will just cover the union. Now, from previous experience we believe that this is the right course to pursue with our trees. New roots will be emitted from the stock quite up to the point of union, but not above it, and the roots of previous years which have penetrated the border in all directions will work up to the rich moist surface-dressing instead of downwards to the sterile subsoil.

When *Strawberry* plants in the open ground are exposed to very severe frosts they suffer much, but while the frost lasted they were covered with snow, which effectually protected them from injury. The Dutch hoe had been repeatedly used between the rows up to the time the autumnal rains set in. The few weeds that remained were picked-out by hand, so that the quarter has now a clean and tidy appearance. Some fine day in March the hoe may be run through them again. Many persons mulch their Strawberry beds in winter. This we have done, but found that it caused an over-luxuriant growth, and that a much better course of treatment was not to apply the mulching of manure until the dry weather set in, which with us is usually some time in May, and before applying the dressing the beds usually receive a good soaking of water. We had begun to dig, or rather fork over, the ground between the rows of Raspberry plants when the snow and frost stopped us. No time will be lost in getting this done, and all other digging amongst fruit trees will be done without delay.

FRUIT AND FORCING HOUSES.

Where many houses of different degrees of temperature are heated from one boiler some experience is necessary to regulate the valves so that the greenhouses, &c., may not be overheated. Our own experience in regard to this is rather different from that of Mr. Taylor, who gave his in a recent number; in his case the temperatures were reversed. The houses that ought to have been 65° were down to 40°, and the greenhouse up to 65°. Now, if this is the case his heating arrangements are very imperfect. Our own experience of the one-boiler system extends over many severe winters, and such a blunder has never happened in any houses under our control. No doubt all the evil Mr. Taylor complains about is caused by the return pipes being higher than the flows. No heating apparatus could do its work with satisfaction arranged in such a way. It is not at all necessary, as Mr. Taylor suggests, to go to the expense of pipes 5 and 6 inches diameter for the main pipes. Three-inch pipes are sufficient for all ordinary purposes, but the flow must be fixed at the highest part of the boiler, and the main pipes must rise gradually to the point furthest removed from the boiler; 1 foot in 100 is sufficient, but, of course, the water will flow more rapidly if the incline upwards is greater. The return pipe must be fixed at the lowest part of the boiler, and by the use of elbows near the boiler both flow and return may be carried along at the same level for convenience. Castings in the form of a T are used at each house to connect the flow and return with the pipes used in heating the house. From this the flow must again rise to the furthest point, and gently fall through the pipes to the return.

EARLY VINERIES.

In houses that are forced early it is necessary to bend the

rods down, so that the points are brought to a level of the lowest buds. Unless this is done it is quite possible that the eyes at the highest part of the house will start first, while those lower down the rod will start weakly or not at all. When it is seen that the eyes are starting regularly the rods must be tied-up to their proper position. In our earliest house this was done, and at the same time the roots received a good application of water, giving a dressing of manure on the surface afterwards to retain the moisture. Future waterings will wash the nourishment out of this dressing down to the roots; it also encourages the active feeders up to the surface of the border, otherwise their natural instincts are downwards, even if the subsoil is quite unsuitable.

Dwarf Kidney Beans are not much in request, nevertheless we would grow a few pots of them; but the space that used to be available for them is now occupied with more valuable plants. We have tried different ways with them, but the best is to sow the Newington Wonder thickly in shallow boxes, and when the seed leaves are fully developed pot the plants deeply, four or five in a 7-inch, using a compost of four parts good loam and one of rotted manure. A good margin ought to be left for applying a rich surface-dressing when the first gathering has been obtained. By watering the plants bi-weekly with manure water, and picking the pods as soon as ready, if they are not required, they keep well for a week in winter if the pods are tied-up in small bundles and the end of the bundle inserted in a shallow dish of water. The plants must be syringed freely to prevent the appearance of red spider.

GREENHOUSE AND CONSERVATORY.

We grow a very large collection of Chrysanthemums. Some of the varieties flower very early and others late, so that by growing a few plants of each the season is much prolonged, but the latest of the late have been cut over this week. And we have commenced to put in cuttings of all the different sections. The Japanese section is not yet so extensively cultivated as it ought to be. Many good gardeners are yet ignorant of the time of flowering and of their great merit as decorative plants. It is believed by many that they flower late, and some horticultural writers have helped to promulgate this fallacy. Some of the Japanese sorts are amongst the earliest to flower, and some of the varieties are also late. Elaine and James Salter are the finest and earliest, followed by Fair Maid of Guernsey, a snow-white flower, as big as a soup plate. There are scores of good midseason sorts, but very late are Grandiflora, a splendid yellow, Dr. Masters, Comet, and G. F. Wilson. We place the pots in a sheltered position out of doors in case some of the cuttings fail, and we like to help our friends who have not yet got such a good collection as we have. Cyclamens are throwing up hundreds of flowers, and we find it necessary to look over the plants about twice a-week to remove any mouldy leaves or flowers. One decaying flower concealed in the centre of a plant makes sad havoc if it is not removed for a week. Primulas are now of great value as decorative plants, but if the flowers are required for cutting the double sorts must be grown. Any plants that show signs of damping-off have the decaying part dressed with dry lime. The latest-flowering Hyacinths have been removed from the plunging material out of doors into a cold pit, the crowns were covered over with small pots inverted for a few days. We have ceased to grow large plants of stage and fancy Pelargoniums, as they are not nearly so useful for mixing with other plants in the greenhouse as smaller plants that require no training. Those who find it answer their purpose to grow large specimens should now fix a wire ring round the pot and train the growths down to it.

FLOWER GARDEN.

We still continue to pot off Zonal Pelargoniums and other plants. Now is the time to take a minute survey of the entire stock of bedding plants, and set-to to propagate those in which there is a deficiency. The first batch of cuttings of Verbenas should be put in. It is best to strike as many cuttings now as will plant the beds. Spring-struck cuttings are far preferable to the old stunted plants that have been kept in store pots through the winter. Went over the grass edgings with a broom, swept the walks, and will roll them on the first favourable opportunity; stones had been swept on to the grass with the snow, and the walks had been injured by sweeping, shovelling, &c. —J. Douglas.

TRADE CATALOGUES RECEIVED.

Suttons' Miniature Spring Catalogue and Amateur's Guide, 1875.—This is a novelty in the way of catalogues, and is a typographical gem of 127 pages, which may be covered by the palm of the hand.

New Plant Company, Lion Walk, Colchester.—*Japanese Bulbs, Plants, and Seeds.*

Dickson & Robinson, Market Place, Manchester.—*Vegetable and Flower Seeds.*

Dick Radclyffe & Co., 129, High Holborn, London.—*Seeds, Implements, &c.*

W. Rollisson & Sons, Tooting, near London.—*General Seed Catalogue.*

J. & C. Lee, Royal Vineyard Nursery, Hammersmith, London.—*Catalogue of Seeds, Kitchen, &c.*

J. Dickson & Sons, Eastgate Street, Chester.—*Vegetable and Flower Seeds, &c.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Books (*Capt. Lyon*).—The "Cottage Gardeners' Dictionary" contains the information you need.

Bay Tree Propagation (*A. B. C.*).—It may be propagated by layers, cuttings under a hand-glass late in summer, and by pieces of the root. For winter Cucumber culture see an answer in our last number.

Early Potatoes and Peas (*W. Berry*).—Ross's Early, Fenn's Onwards, and Ash-leaved Kidney Potatoes. Laxton's Alpha and Ringleader Peas.

Wild Ginger.—Sir S. Baker, in his recent work, "Ismailia," says, "We now left the Fabbo path, and struck off to our left for several miles, over ground that had been cleared by burning, which showed in many directions the crimson fruit of the wild Ginger, growing half exposed from the earth. This is a leathery hard pod about the size of a goose egg, filled with a semi-transparent pulp of a sub-acid flavour, with a delicious perfume between Pine Apple and Lemon peel. It is very juicy and refreshing, and is decidedly the best wild fruit of Central Africa." A correspondent wishes to know the botanical name of the plant.

Glazing without Putty (*J. H. Howard*).—Send us an outline drawing with an explanatory note.

Climbing Roses (*St. Edmund*).—Yours is a question often asked but difficult to answer. There is no real perpetual climber that is a good red, though there are some old summer climbers, as the old red Boursault. One of the best Perpetuals to be trained against a wall is General Jacqueminot. Any of the strongest H.P.'s, as John Hopper, Charles Lefebvre, Madame Clemence Joigneaux, will do for a wall if not required to climb too high. Climbing Devoniensis will suit your purpose very well, and we could recommend you to try Celine Forestier. One of the best plants for a porch facing north is Clematis Jackmanni; you might also plant the Ampelopsis Veitchii; the foliages of the two harmonise well together.

Roses under Glass, &c. (*Rev. E. Liddell*).—1, We should advise Roses to be planted both in boxes and in an outer border, to be trained-in after being established, those in boxes in the house supplying bloom in the first instance. 2, The foliage will not hurt if restrained within bounds and if properly syringed. Roses in a house want plenty of ventilation—*i.e.*, not draughts, but air and light. 3, Marechal should be your standard dish—no other Rose is so well worth growing in a house. Celine Forestier, Climbing Devoniensis, Madame Willermoz, and any of the strong-growing Teas are also worth growing. We do not know of any red climbing Rose for a greenhouse, though very likely Cheshunt Hybrid will succeed.

Coprosma Baueriana variegata Propagation (*J. S. B.*).—This, as you say, is one of the most beautiful of variegated plants, either for summer bedding or greenhouse decoration. It is rather difficult of propagation, doing best from layers, which should be made from now to March, toegueing them as for Carnations, and securing with pegs. By autumn they will be well rooted, and may then, or in spring, be detached from the parent and potted singly, keeping rather close and moist until they are growing freely. It is also propagated by cuttings in spring, taking off the points of the shoots with two joints and the growing point, inserting in sandy loam with a little thoroughly-reduced leaf soil or sandy peat intermixed, the pots being well drained, and the surface half an inch deep of silver sand. They require to be placed in a gentle bottom heat of 75°, and kept close, moist, and shaded until well rooted. Avoid making the soil very wet, or the cuttings will turn black. They also strike in a close frame in August without bottom heat, shading from sun.

Planting Conifers and Ivy (*H. B.*).—The best time to plant Conifers is in autumn, the first moist weather after the end of September and up to the first severe weather of winter. The next best time is from the middle of February, weather being mild up to their beginning to grow. These latter remarks apply to young trees and such as have been frequently transplanted. We have transplanted a great number of Conifers, and find they are moved quite safely in early April, or when they are beginning to grow; but it is necessary, if the weather continue dry, to water occasionally, and if the soil be dry at planting give a good watering at the time of planting, and if showers fall frequently for a few weeks they will seldom require any more. Ivy is best planted in February, or so soon after as the weather is mild, and up to its commencing to grow. The quickest-growing subject for a hedge as shelter to a Rose garden will be Evergreen Privet, but it is of no use for turning cattle. A Thorn or quickset fence is best for that purpose, and it may be made semi-evergreen by planting a Holly in every yard along with the quicks. The sweetest hedge we ever remember having seen for a screen was Sweet Briar, the plants being planted a foot apart, and it was cut like any other to keep it trim.

Vines and Peach Forcing (*J. W.*).—Vines when very early forced to be ripe in April and May are better for bottom heat, and especially the outside border if any. The pipes will need to be as many as for top heat, and in a chamber beneath the border. With the border mostly inside, for both the Vines and Peaches bottom heat is unnecessary, as we stated in a former reply, to have fruit in May and June. We meant six rows of pipes including the returns—two flows and one return along both sides of the house, but it would not be other than an advantage to have two flow and two return pipes, or you may have the three or four pipes, whichever you employ, on the level, one of which will only require to be a return pipe. Half at least of the pipe surface should be trenched for holding water for evaporation. We should not plant the Vines as a vineyard, but confine them to the rafters, the roof being wired at 16 inches distance from the glass, and the Vines 3 feet 6 inches to 4 feet apart. Jersey or Guernsey offers no advantages for forcing Vines. The main thing is a favourable climate free from smoke and obnoxious gases

from chemical and other works, a suitable soil, and fuel to be had cheaply. Nothing would be gained by southern clime with fuel at double value.

Geraniums for Button-hole Bouquets (*W. B. G.*).—The doubles are the best for this purpose, as Incendie de Fontenay, Sapeur Pompier, Le Vengeur, Victor Lemoine, Gambetta, and Album plenum. Of the singles—Harry King, Master Christine, Reine Blanche, Bride, President Thiers, Mrs. Sach, and Diana. Charcoal is better for mixing with the soil for Geraniums than crocks, which answer no purpose only to keep the soil open, but charcoal is all carbon.

Sea-kale-earthing for Blanching (*B.*).—It should be earthed for blanching any time between now and growth commencing. If you do it upon the ground, ashes or sawdust would be better than soil, though it will, if of a light sandy nature, answer well. We should earth about the middle of next month. Could you not invert some large pots, boxes, or even hampers, with the bottom out? Anything to allow a space of 3 inches clear of the crowns and 15 inches high will answer, covering these with leaves or litter, so as to exclude air and light, and by this mode you would have it earlier, and another lot covered with ashes would succeed it. The roots will not be injured by the late severe weather, it being very hardy. Ours is not in any way injured. Some we took up after the frost is growing freely.

Fern Case Re-arranging (*T. M. N.*).—The best time to take the plants and re-arrange them is the beginning of March, just before or when they are commencing to grow. A neat-growing plant with small leaves and suitable for ferneries is Ficus repens. It will cling with the tenacity of Ivy to almost anything, and up or down as tendency is given the shoots.

Fruit Trees for Peaty Soil (*J. B.*).—There will be no chance of trees on the free stock coming to a bearing state in a reasonable time, but they will do if liberally manured and well dressed with lime, which for a peaty soil should be magnesian. A hundred bushels per acre is a good but not too heavy dressing. We should prefer the trees on the dwarf stock—*i.e.*, Apples on the Paradise, Pears on Quince, Cherries on Mahaleb. Plums do very well, lime being added and the ground liberally manured on the surface, top-dressing annually. We do not know what you wish as to kinds, but if you wish for the names of varieties we shall be glad to give them if you write us stating what you require. Bush fruit does well, especially Raspberries, and Red Currants; but Gooseberries and Black Currants suffer in a dry season.

Period of Yucca Flowering (*J. P. P.*).—The period at which a Yucca first flowers is variable, but usually about the seventh year, or when the plants are sufficiently strong. After once flowering, the stem and crown from which it is produced die, and fresh plants or suckers issue from the root-stem, and these flower when they are sufficiently grown.

Coiling Vine Rods in Pots (*Idem*).—The system you propose was advocated by Mr. Mearns at Welbeck, and exploded by Mr. Fish in 1835, so that your idea has no claim to originality, nor is it likely to succeed. The cane coiled round the inside of the pot, say half its length, will certainly root and break the eyes freely, but will not have sufficient rooting power to bring to maturity a crop of fruit. Bottom heat is necessary to secure the speedy rooting of the canes.

Vines Transplanting (*Idem*).—Do it early in March, lifting them carefully, also the layered Vines, which we presume have been detached from the parent Vines at least a year, they having been layered six to eight years. They having been spurred and reaching the top of the house is no consequence, only they may break rather weakly, and the only good you could have done them the year before lifting would have been to originate shoots nearer the rod, or train a fresh cane from the bottom, and that you may do this season. They do not require any particular treatment the season before removal.

Apples, Pears, and Plums for Orchard (*Orchard*).—The ground should be dug or trenched, but not bringing-up any of the bad soil or gravel, and if poor be liberally manured. Being of a shallow nature the trees should be liberally top-dressed, so as to keep the roots near the surface, for rooting into the gravel it is likely the trees would be subject to canker. Also see that there is not water in the subsoil, and if there be, remove it by efficient drainage. *Culinary Apples* are—Keswick Codlin, Lord Suffield, Alexander, Cox's Pomona, Rymer, Blenheim Orange, Kentish Fillbasket, Yorkshire Greening, Dumelow's Seedling, Bedfordshire Foundling, Warner's King, Alfriston, and Norfolk Beefing; and for long-keeping, Annie Elizabeth. *Dessert Apples*—Red Astrachan, Devonshire Quarrenden, King of the Pippins, Cox's Orange Pippin, Graveostein, Reinette du Canada, Lord Burghley, Lady Henniker, Boston Russet, Court of Wick, Scarlet Nonpareil, and Stormer Pippin. *Pears*—Jargonelle, Beurré Giffard, Williams' Bon Chrêtien, Flemish Beauty, Beurré Hardy, Beurré Superfin, Urbaniste, Doyenné du Comice, Marie Louise, Beurré Diel, Beurré Bachelier, Beurré d'Aremberg, Zephirin Grégoire, Jean de Witte, and Bergamot Esperen. Catillac, Vicar of Winkfield, and Verulam for stewing. *Plums, dessert*—Green Gage, July Green Gage, Jefferson, Lawson's Golden, Kirke's, Ickworth Impératrice. *Kitchen*—Early Prolific, Mitchelson's, Diamond, Prince Englebert, Prince of Wales, Victoria, White Magnum Bonum, and Winesour; also *Damsons*—Cluster or Crittenden, Prune, and New Large Bullace. *Cherries*—Belle d'Orleans, Black Heart, Bigarreau Napoleon, Elton, Kentish, and May Duke. In respect of trees suitable for different aspects of walls, a south one is suitable for Apricots, Peaches, and Nectarines; east for Plums and Cherries; west for Pears; and north for Morello Cherries.

Tenant Removing Shrubs (*Country*).—Having planted the Roses and other shrubs, you cannot legally remove them without the landlord's consent.

Training Vines to a House (*F. J.*).—You have understood us perfectly as to the training of the Vines, but not as to the origination of the bearing wood or spurs. Originate one at every turn, which will give you a shoot for bearing at every 18 inches along the rod, between these have another midway of the cross or space between the curves. This will give you bearing wood at 9 inches distance apart along the rods, or you may have the spurs or with two shoots, and either at the curves or midway as you may prefer, the main thing being to allow each equal space for proper exposure to light and air. We should wire the wall vertically at 9 inches distance apart, which would be cheaper in the end than wood for fixing eyelets or nails, the wires being good for tying the bearing shoots to, the other only being of use for the rods. You will see the advantage of the wire, which should be fixed at about half an inch from the wall, which though of stone will have joints into which may be driven the eyelets for the wire. The requisites for wiring walls you will see advertised in our columns.

Cucumbers Bitter (*A Very Old Subscriber*).—The principal cause is their being grown too slowly, and therefore long in coming to a useable size. Give more bottom heat, also top heat, and the fruit will be fit to cut in a shorter time and be more tender and less bitter. The kind you have is one of the best. The late dull weather would tend to slow growth, ill-elaborated sap, and consequent bad flavour. Get rid of the present fruit as soon as you can, and encourage freer growth. Slow growth from a low temperature may give fruit, but not of delicate flavour.

POULTRY, BEE, AND PIGEON CHRONICLE.

THE EXHIBITION DORKING.—No. 5.

BY T. C. BURNELL.

The mysteries of preparing fowls for exhibition seem almost as terrible to the young poultry-fancier as the prospective gridiron to the candidate for masonic honours; yet the latter may not be found quite so hot as expected, nor the former beyond the power of the simplest beginner. I remember well how, when commencing, I was offered all sorts of preparations for putting on the comb and feathers, and without which it was said to be impossible for a bird to win; however, I managed to get on without them then, and shall hope to do so for the future. As some little preparation, however, is required, I will briefly mention all that I think is necessary.

By far the finest thing to get birds into good condition and brilliant plumage is a good grass run, and if this is obtainable little else will be wanted; but if birds are penned-up in a small yard some little management will be required to get them into good condition. I have before mentioned what a capital thing peas are, and a few should always be given every other day to exhibition birds; and it will be well to bear in mind, too, that soft food produces soft feather, and that though it will not hurt birds to be hungry, but rather tend to "liven them" up, that overfeeding will be certain to give them indigestion, and to turn them black in the comb. It is a common mistake to suppose that Dorkings require to be fattened-up for exhibition. Now-a-days the judges never go by weight. What they look for is a large frame, with plenty of room for putting on flesh. Some breeds look all the better for being fattened, but not Dorkings, which are naturally quite plump enough.

Dorkings stand exhibition worse than any other breed, and if sent from show to show will very soon break down in health, and become as useless for stock as for the show pen. I constantly hear it said that such a bird will "do to breed from," but I don't understand this. If a bird is not moderately perfect it is hopeless to expect perfect chickens from him, and a broken-down constitution is sure to produce degeneracy if nothing worse. Some birds, though in capital health at home, will mope and look wretched when penned. To such a little toast soaked in strong ale may be given the day before; but it must be borne in mind that all unnatural feeding will surely have to be paid for, and that a little cooked meat with a rusty nail placed in the drinking water should be quite sufficient.

Before going to their first exhibition fowls should always be trained to a pen at home, or else when the judge goes round to look at them they will either get into a corner to hide themselves, or else fly and flap about, and most likely send a lot of dirt and rubbish into the judge's eyes, in which case the latter may be very naturally expected to go on to the next pen. The simplest plan will be to purchase a couple of wire pens and water tins from one of the well-known contractors who supply our shows, and to fix them in a convenient corner where the young birds may be accustomed to exactly the same place that they will be put into when at exhibitions, and will thus be made to feel quite at home, and to show themselves to the best advantage. I should always advise that the birds be caught at night, as then there will be no struggling or pulling-out of tails, and the birds will quietly submit to their fate. Some little practice will be required to hold a large bird without damaging his plumage, but a little practice will soon master this. In taking a bird off the perch it will be best to seize him round the wings with both hands, placing the tips of the fingers of one hand under the breastbone to support the body, and in this position you may defy any struggling; but sometimes we can only spare one hand to hold the bird with, the other being required to open the lid of a hamper, administer physic, or wash the dirt from the bird's feet, and here the beginner will find a difficulty, and I must say that until lately I myself was sometimes mastered by a large cock weighing 12 or 13 lbs., but thanks to instruction from Mr. Teebay I believe I am now a match with one hand for a "regular kicker." The plan is this: Place the thumb of one hand over the wing, grasp the thigh firmly with the first two fingers of the same hand, and with the remaining fingers placed under the breastbone you will have the bird fixed as firmly as in a vice. A bird should always be taken out or put into a show pen or hamper head first, otherwise the tail and wing feathers are very liable to be broken. If the fowl is large and the hole small, turn the bird on his side, and he can make no resistance. A fowl should never be caught by the leg, as not only is it a very unworkmanlike plan, but the bird will very likely flap about and hit you two or three smart blows

in the face with his wing, besides scratching your hand with the toe nails of his other leg. The best plan is to catch him by the wing, and if the latter is seized close to the body you may hold the bird from the ground by it without the least injury to the bird or yourself.

A basket, as in the drawing, will be found most suitable for sending about exhibition birds. It has no claim to originality, but is here given for the benefit of those who may not know the best shape. The basket must be round inside, and made of light wickerwork, lined with strong calico or thin canvas. The lid should open in the middle, so as to allow plenty of room for the fowls to be put in and taken out without damaging their feathers or comb. The sides need not be filled-in with wickerwork, but I have found that only one rim round the middle of the basket is not sufficient to make it firm, so it will be better to have two as in the engraving. The top must be made of close wickerwork, as, if only made of open work, the railway porters will catch hold of the thin bars to lift it by, and will very soon break it all to pieces; while if the top is made of close wickerwork they will be obliged to catch hold of the handle in the

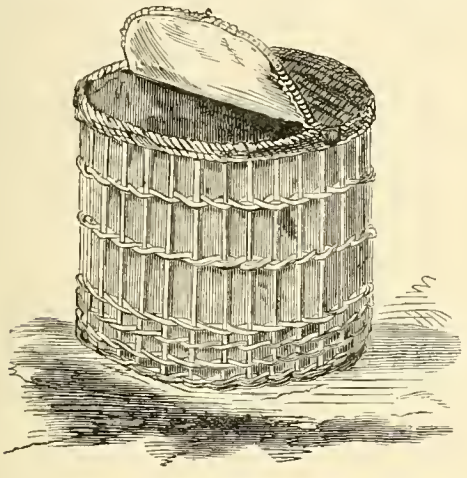


Fig. 12.

middle. The diameter of a basket for a single cock, or a cock and hen, should be about 24 inches; height 27 inches, to allow the cock to stand up without bending down his comb. For hens 15 inches high will be sufficient. The lid should be firmly tied down with string in two places in case one fastening should become undone. If the birds have to go a very long journey a small cabbage or lettuce may be hung up inside the hamper for them to peck at; but anything else put in the hamper will only make their feathers dirty, and corn would be lost. The bottom of the hamper should be covered with clean straw, which should be thrown away when the birds come back, and the hamper put out in the sun to air and freshen for another trip, as a close-smelling hamper with dirty straw is quite sufficient in hot weather to make the birds ill.

The comb, earlobes, and wattles should always be sponged over the last thing before starting for the show, first with lukewarm soap and water, and afterwards with cold water. This will make the birds look very fresh and bright, and if they are in good health nothing more will be required; but occasionally it will be better to smear the comb, &c., over with a little fresh butter, and this is all I ever use. I have been recommended salt butter, but though it may make the birds' combs red for the once, it is too strong, and will very likely cause a tender comb to ulcerate. I have also tried oil, vinegar, whiskey (!) and everything under the sun, but am sure that simple butter is as good as anything, if not better. The feet should be washed with a brush in warm soap and water in which a very little soda has been placed, and afterwards dried. It will be much the simpler plan to get someone to hold the bird while these ablutions are going on, but if this cannot be done the bird may, after a little practice, be held between the knees.

BRISTOL POULTRY SHOW.

WORDS INTRODUCTORY.

Ticket taken—platform run across. Ah, yes! one place empty in this carriage; no time to lose. In—settled—plaid across my knees—Journal for new year got by second delivery, for it is Thursday, January 7th—paper cut open, I prepare to read. Before beginning glance at my opposite neighbour. Why, say I to myself, if that isn't old Smith of St. Boniface's grown very lean and taken to very extreme clerical garb, dog collar, shaven cheek, and all. "Smith, it's you, surely." "Why, ——, it's you, isn't it?" "Twenty-five years make some difference, old fellow. Why, how thin you have grown!" "Yes, and how fat you have grown." "Well, but you are bald." (Smith had just raised his cord-bound round hat). "Don't you talk, for your hair has lost its colour." Eyeing Smith's long coat, and remembering his former tastes as an undergraduate, I say archly, "Don't you find that coat of yours awkward after hounds?" "Hush, hush, I'm an R. D. now." "Yes, I know, Rough Diamond; but you always were." "No, no; Rural Dean, sir." But poking me about old tastes, follies long since forgotten, here he sighed, "I suppose you have outlived your old craze for cocks, and hens, and Pigeons. I remember you wanted to keep the last at St. Boniface's." "Not the least," I replied; "why, I am going now, this very day, to Bristol Poultry Show." "Ah! an excuse for getting from home, I suppose. But tell me, is not all this fuss about the pleasure of poultry-keeping mere fuss and nothing more? One neighbour of mine says he finds great enjoyment in keeping Brahmas, another is wild about Spanish; in fact a great number of my brother clergy down in Blankshire are enthusiastic poultry men." "Glad indeed to hear it," say I; "and mark me, they do not exaggerate. There is the watching the development of form and feather, the wonder as to how this chicken will turn out and that. There is a resource never wanting for country pleasure. No need of constitutional walks, no moping by the fire, no great dependance upon other people. Home, Smith, is doubly home with pets around you. You get amusement; your wife, your children ——." Smith exclaims, "I do not think it right for a priest to marry, so no more about wife and children, please." N.B.—Smith was always in love in old days, and used to read me his letters. "Well, leaving the children out and their mamma, I say," raising my voice, "the pleasure your friends tell you of is not exaggerated. Then, Smith, the shows. Soon we shall be at Bristol station: then I ride through that fine ancient city. Here a glimpse of an old Elizabethan house, there a quaint gable; then the picturesque tower of St. Stephen's, the narrow old-world streets, the busy faces, the charity boys in their queer costume, the drawbridge, College Green, steep Park Street, and to crown all, the Show at the Drill Hall, where friends meet, and criticise, and enjoy feathered form and beauty, &c. Why, here is Bristol station. Good-bye, Smith. Go home, cut off part of your petticoats, take to a wideawake, grow your whiskers and keep poultry, and you will be a happy man yet."

I am soon in the Drill Hall, and say to one much interested, "This is to be your last Show, I fear." "Last Show! Why, it is the first! We have eight hundred more entries than ever, and the Hall is crowded with visitors." Glad, very glad indeed. Well done, plucky Mr. Cambridge; he deserved success, and he has obtained it. The Hall is full of fowls, for the walking spaces are even over-narrow, and many people are in them; for no longer is the Rifle Drill Hall, as in former years, a place to saunter through—you must actually squeeze your way.—Wiltshire Rector.

"Ann how is our patient to-day?" said the doctor. "Thank you, kindly, sir," replied the nurse, "we do think now all danger is over. She has grown more than twice the size she was since you were here last, and we hope now she will do well." And so with Bristol. Thanks to able, courteous, energetic Mr. Cambridge, this Show, so nearly a thing of the past, has entered on a new life, and we think we see a bright unchequered road before it—a road where sunbeams dance, and whereon friends meet pleasantly; a road on which there are no clouds overhead, and need be none below. We consider it most plucky of Mr. Cambridge so gallantly to come to the rescue of this great Show; and certainly he, backed up by his friends, has achieved a great success as far as the arrangements and entries are concerned. We hope when the more serious time of adding up the accounts and paying them comes, that the balance will be considerably on the right side. Imagine 1100 entries more than last year! When we get into four figures it really looks hopeful and encouraging. No doubt many will think the Selling classes account for this huge increase, but not so: not one-quarter of this additional number is brought by the sale classes. No! We believe most assuredly the plan of allowing any number of pens to go in one basket is the chief reason, and we are fully conscious that this great step on the right road has been brought about by one of our own friends, though now no more of us. We feel quite confident this is an important step in the poultry road. The quality of the birds was something quite out of the common; we never saw so few poor pens. The giant strides made during the past two years in most of the breeds are something really wonderful. We notice this as much among the Cochins and Brahmas as anywhere, and the poultry mania is more infectious than ever. People join the poultry world, and float down the "fancy" ways from all circles and all places. Only at this Show we heard of one gentleman who was seized with the fever so badly, that Buff Cochins of the best quality must be had at any cost, and an article of great domestic use was to be sold to supply

the "needful" to purchase some of the best Buffs in the world. No more, then, of talking about the poultry fancy dying out. It is absolutely stuff-and-nonsense. Prize-poultry keepers are now legion—as many in number almost as sparrows—if anything rather too numerous. And this reminds us of the Selling classes, and what they do: we feel we are on delicate ground, yet we do doubt their usefulness. There is a danger of two things, and there must be, and is, fear whether between two stools something must not fall to the ground. We will speak quite plainly. Selling classes are either filled with such utter rubbish as to bring only dire and woeful disappointment to purchasers, or they have two or three very crack, valuable birds, simply placed there to win a good first prize with, or a cup, or to run up the points for a point cup. Well, these choice specimens entered at £2 or £3 fall into the hands of some lucky fancier, and the result—well, the result is that prices for good birds are spoilt, and the poultry world gets overstocked; for the amateur will not pay fair prices for honestly worthy birds, thinking he can pick them up at half the price in these Selling classes.

And now we are on this, the opening day of a fresh season, we must speak of the Sunday business. We cannot think how committees can include a Sunday. We feel certain it must lessen the entries, and for the exhibitors and their servants it is indeed a hard time; besides this, the cost of labour, food, gas, &c., must be a great item in the Show expenses for this, to the committee, completely useless day. Two days are enough for any show. If a show was kept open for ten days someone would come. People keep putting it off, thinking they will go the next day, when, if it was only open for one or two days, they would go on one of them. We seriously hope this will be taken into consideration by the different societies who have hitherto had this Sunday plan. And Bath and West of England above all, do try and manage something better this year.

But we must turn back to this Show and its inmates. The birds were well fed on Spratt's food mixed with ground oats and barleymeal and whole wheat. The pens were freshly chaffed every morning and kept beautifully clean, and the corridors were sprinkled with sawdust, and looked bright and fresh every morning. Altogether the management was admirable, and we hope next year that we may find more entries, and all the long end of the room, which this year had only one row of Pigeons, required for poultry, and the Pigeons consequently over them.

The *Dorkings* were far more numerous than at last year's Show, the best classes most decidedly being the Whites. In Coloured cockerels first was the Manchester first-prize bird, and well placed; he is not, however, very first-rate in the comb. The second was rather too leggy for a Dorking. Third a very good bird, only that his middle toes are badly curved. No. 11 (Denison), a fair bird; the rest indifferent. Coloured pullets a good class. The first a very good and deep bird, her only fault being white earlobes; the second small and narrow; third good, but hardly equal to the same exhibitor's unnoticed pen; fourth a mistake, being feathered on the legs. Pens 18 (Hamilton), and 26 (Newick), were also good. In old cocks therere a we number of massive birds, but with one or two exceptions their combs were over, this latter, no doubt, being caused by the late severe weather. First a large bird with good broad back and nice feet, but hardly equal to the second, the Palace first-prize bird. The third has plenty of bone, but his comb was right over. Pens 37 (Darby), and 39 (Whitworth), were very good and massive, but spoilt by the same defect—lopping combs. Pen 40 (Miss Murray), a thorough Dorking. The first-prize Coloured hen was well placed, it not being the first cup she has won by half a dozen. The second had a very bad corn on one foot, and was hardly equal to Mr. Lingwood's No. 45. Third good, only for an upright comb. No. 47 (Pilkington), large, but in-kneed. 52 (Darby), a nice rose comb. Silver-Grey cocks of any age were a very poor lot, notwithstanding that there were thirteen entered. The second prize was withheld, but one or two birds might well have been thought worthy of this honour, notably pen 63 (Wren), a nice bird with jet black breast and tail, and white saddle and hackle; but the first-prize bird was so far ahead as to throw all the others into the shade. It is evident there is plenty of room for improvement in the cocks of this breed. Silver-Grey hens were a good class. First a nice young bird with good head and feet. Second one of the largest hens we have ever seen, but unluckily the claws of one foot badly put on. The third was a good bird, but hardly equal to No. 76 (Cresswell), the latter being particularly good in colour. White Dorkings, as before mentioned, were unusually good, especially the hens. First was a capital bird, but his comb a little too far over the beak. Second and third also good, but showing a slight yellow tinge. 88 (Cresswell), a nice cockerel; 86 (Robinson), the first-prize Palace bird, but here unnoticed; he had certainly got into better company. Pen 91 (Hayne), deficient in chest. White hens were a grand class. The first-prize hen, being very white and good in feet, comb, and shape, was easily first. The second and third were also very good birds and nicely washed. With one exception the whole of this class were good, and the Judge rightly styled them "a good class."

Brahmas.—Dark cockerels were an excellent class, though lacking the interest that such a class would have had earlier in the season, from the fact that the winners are all now well known. First was the Birmingham winner, a well-shaped and symmetrical bird, peculiarly broad in saddle, where so many cocks now fail; still his comb is narrow and peculiar, and we should have been inclined to give the first place to Mr. Lingwood's grand bird, which was placed third. His size was immense, and the dense blackness of his fluff splendid. Second and fourth were Mr. Ansdell's famous cockerels. The second-prize bird looked out of condition and knocked-up with his successes. The fourth-prize bird is, we think, slightly slipped in wing, but very richly black in breast and fluff. Miss Douglas Pennant, Mr. L. Wright, Mr. Ensor, all showed good birds. Pullets.—First was one of Mr. Leno's beauties, whose pencilling has so often been described; she is very sparsely feathered on the leg. Second a pretty pullet, with bright and silvery ground colour and dense black neck-hackle: she is decidedly hocked. Third, of good size, and a nice bird all round; her back pencilling is somewhat indistinct. Fourth was not a remarkable bird. We hardly thought Mrs. Vigor's pullet worthy of her very highly commended, probably good marking on the back attracted the Judge's attention. Pen 317 (Ensor), was beautifully marked on the breast and dark; she was evidently a very early bird of last year, and had so lost the freshness of the early pullet colour. Cocks.—Here we could not see the *rationale* of the awards. The first-prize bird is narrow in back and devoid of pencilling on the saddle; we much preferred his owner's third-prize bird, a gigantic fellow. Second is a massive bird. If we are not misinformed that he is a bird which we greatly admired as a cockerel two years ago he has hardly fulfilled his then promise; still he is a noble bird, and conspicuous for grouse-feathering in tail. We thought Mr. Lingwood's very highly commended cock the finest bird in the class. He is a broad and magnificent bird, and the silver and green shades on the wings are very clear. Hens.—First was far ahead; her size and shape magnificent; pencilling, too, and leg-feathering good. Second, too, a beautiful bird, pencilled evenly all over, right up to the tail; she was not so large as the first, but quite as beautiful. Third large and good in all points. Lady Gwydyr's highly commended bird was as perfect a specimen as one could wish to see, her pencilling the clearest possible; placed next to the cup hen she did not show to disadvantage save in size. She appeared weak on the legs, which must have lost her a place. Pen 372 (Peake), though small was remarkable for intensely dark marking; and Mr. Evans's two very highly commended hens, though a little narrow, must win almost anywhere as a pair. As a rule the larger pencilling is all in request now, hardly any of those very dark birds with minute markings being shown.

Light cockerels we thought a moderate lot, in no way to be compared with the Dark. First was the best bird, good all round. Second, a showy bird, with nice neck-hackle, but too much hock-feathering, and very yellow. Third, a small heavily-hocked bird, with no particularly remarkable points. Pullets were better. We cannot say that we altogether admired the first. Her neck-hackle was mossy in front. To our idea the second was far the best bird in the class, form good, and such as should grow into a large hen; hackle excellent, still no markings on the back; the only fault we could see in her was creaminess in ground colour. Third was not remarkable, her markings bright and clear; still she was a small bird. Fourth a large-bodied bird. The very highly commended birds of Mr. Crook and Mr. Haines were both good; the shape of the former beautiful, but she will not make a large hen. Cocks.—First was an old friend, and certainly he is a model bird in all but size; second a grand bird, broad and massive—just the form we like, but his comb is not pretty; third had the prevailing fault of a very narrow saddle, otherwise a good bird. Hens.—First a grand bird in shape, size, and leg-feathering; she appeared to us hardly dry from the wash-tub on the first day of the Show, and so not to be seen to the fullest advantage; second a deep and broad bird, but brown in hackle, and not equal to Mr. Crabtree's third hen, which was perfection in shape and colour, though not large; pen 487 (Percival), a fine bird, though a little deficient in hackle.

Cochins.—These were certainly a most wonderful collection, the quality was indeed good throughout. We hope next year Mr. Cambridge will add Black Cochin classes, for this variety had to go to the "refuge" this time. We hear there is a chance, and rejoice accordingly, of that gentleman, who so lately retired from the White Cochin world crowned with laurels, being added to the—(no, not the black book), but list of Black breeders. Cochins, Buff came first, twenty-two cockerels, with Lady Gwydyr's Birmingham champion at the top of the list; his colour is lovely, but he seemed weak in the legs, or would have perhaps run Mr. Burnell's old cock close for the champion cup. The second was also of good colour and large, but rather hocked. Third, capital colour, and will make up a large bird. 119 (Mapplebeck), a most beautiful bird. Buff pullets were also a splendid lot. Lady Gwydyr first again with a very beautiful coloured bird, though

hardly heavily leg-feathered enough. There were one or two pens we liked almost as well. Mr. Crabtree's pens, 132 and 134, both very good. 147 (Burnell), also very good, but a little twisted in hackles. Second we did not much care for, liking the third quite as well. 146 (Darby), a very grand pullet, but she had lost her tail, or we think would have been near first. Old Buff cocks were splendid. The first won the champion cup for best pen in the Show; his colour is very rich, and all his points perfect. We quite hold with this award, and congratulate the owner on his victory. Second and third both rich birds, and well placed. 159 (Tindal), and 158 (Gwydyr), both admirable birds, and perhaps one of them should have been in the third place. The Buff hens were a small but good class. The first was the old Palace winner in bad condition, and looks as if she needed much care. Second was a beautiful colour, but not very large, claimed at £12 12s., and cheap. Third also in poor condition. We almost preferred 166 (Burnell), which was of exquisite colour and good shape. Partridges were four very fair classes indeed. The winning cockerel is very nice, and looks as fresh as ever. Second we did not much fancy, rather preferring 186, very highly commended (Shrimpton). Third was a nice bird and of good shape, and being very young will doubtless make up well. The first pullet was well marked, but her foot-feathering was bad, and her comb had a deep cut in it. Second was not very large, but beautifully pencilled. Third a good bird also. After these we thought 205 (Sugden), as good as any. In old Partridge cocks we thought the winners well placed, though 207 (Crabtree), was a good bird, and so was 216 (Sedgwick). In hens the winner was a beauty, and we should have come here for the cup for best Cochin hen, in preference to the winning White. This Partridge hen was good all round, and larger than the White. Second large, but looking rough. Third was large but rather too gay in colour. We preferred 223 (Tudman), or 218 (Aspden). White cockerels came next, fifteen birds. The first was the Palace winner; he is fearfully hocked and rather narrow, though grand in comb and colour. Invaluable as this bird will be in a breeding pen, we do think he is too hocked to win, although any fair amount of hock we do not object to. The second was poor, being bad in colour, unfirm in comb, and squirrel-tailed. The third was large and good in shape, and should have been higher. We thought 235 (Bloodworth), or 236 (Tindal), much superior birds to the second; the latter is of great promise. 240 (Fowler), very good. In pullets the first was in her prime, being in beautiful order and just on laying. The second we did not like; she was small, and dwarfed-looking. Third, a beautiful shape, but small. 252 (Burnell), was the Palace winner, and might have been in the list here. 256 (Whitehead), small, but good in shape and colour. 257 (Fowler), looked old enough to have sons and daughters in the same class with her. 258 (Woodgate), was, we believe, thought to be as good as any pullet in the class. White cocks were a good class, though many of the birds showed signs of being overshown, notably so Mr. Percival's old White cock, which seemed quite knocked up. The first was very white and smart-looking, with fine clear hackles, his only fault being too large a comb. Second, a fine bird, rather dirty, but of good shape. Third we liked best of the lot, though he is rather short of leg-feather. 266 (Whitworth), very large, but yellow. In hens the cup bird was of splendid colour and possessed much quality; still we preferred the second in spite of her very ugly comb, for her shape was so very grand. Third, a nice showy hen, though we liked 277 (Whitworth), or 279 (Woodgate), just as well. This class finished the Cochins, and we cannot but note the great progress in these classes, even during the last year.

Game.—We thought these classes very good, and we believe the judging was immensely approved of. The winning Black Red cockerel was very smart and good in plumage. Second, wonderfully hard in feather, and showy. Third, a good bird, with fine head. 730 (Stagg), a nice bird, and a good-shaped one. The cup hen was a great beauty, as good as anyone we ever saw, and we consider she well deserved the cup. Second also very smart and well shown. 751 (Pope), a splendid bird. 742 (Tyte), also a good style of hen. The cup for best Game cock fell to Mr. Matthew's splendid Brown Red old bird looking grand. The other winners in this class a long way from him. 762 (Osborn), a good bird. The first Brown Red hen was very good in shape and head. The third we liked as well as second, though there was not much between them. 776 (Wolff), very stylish and good. In Duckwings the winning cock was lovely in colour and fine in head. Second, a good smart bird; third running second close. 798 (Cock), very smart and good. 804 (Phillips), was disqualified for being plucked in hackles. We could not help smiling at seeing this in the catalogue, for, if we remember rightly, this was the party who in a friendly contemporary wrote such an indignant account of Mr. Winwood's misdemeanors. We can only think that Worcester must be a very naughty place, and congratulate Mr. Martin on his departure from a city where Spanish cocks are stolen and evil practices in the poultry line prevail so strongly. The trimming in this case was most palpable, and we hope Mr. Phillips will smart all the more when he hears that had his bird been left alone it must have won. The first Duckwing hen was very good in colour and shape, and in fine feather. Second and third, nice birds. 816 (Dutton), a very smart hen.

Spanish.—Bristol was always the stronghold of this breed, and seems likely to continue so. We still see the old names in the list, and hope long to do so. The cup cockerel was a beauty, fine in colour, good in face, and winning well. Second, a most beautiful bird of great quality; so was third; in fact the whole class was full of beautiful birds, and we did not envy the Judge his work. Perhaps 501 (Jackson), was as good as any of the non-winning ones; this was very highly commended. Spanish pullets were also very good, and the winners may be proud of their places. We think we liked 511 (Palmer), as well as any; this was, we believe, also the cup Yarmouth bird. 542 (Jones), had a capital face, and 547 (Chilcott), was very good all round. Old cocks were the worst represented, though the winners were good, and the names tell us the quality. In hens the first was very good indeed, but we liked one or two more as well. The third was a grand hen; and 563 (Rodbard), good. 567 (Darby), was a magnificent hen, with the largest face in the class, but the bars of her pen were so rusty, and she would take such notice of the outer world, that in continually putting her head out of the window she made her face so red with the rust that she lost her great chance, we should say, of being in the list.

Hamburghs.—All the varieties mustered well, and the names of the winners show all the best birds in the fancy were in the Exhibition. Mr. Long's pens were all empty; we hear this gentleman made a mistake in the day. The Gold spangles were two splendid classes, every cock being noticed, and nearly all the hens. The cup cock was very good—quite a picture; second almost as good; third quite up to the mark. 572 (Duckworth), had a splendid comb, and 573 (Beldon), was very excellent in colour. 575 (Hyde), very stylish and good in comb. The first hen was most beautiful in colour; second and third also very rich and brilliant. 584 (Robinson), well marked. Silver-spangles were also two good classes; the first cockerel easily first; second and third also good. 599 (Ashton & Booth), too large in comb, but well marked. The hens were all good. We liked the third very much, and 619 (Browne), was wonderfully spangled; 623 (Walker), also capital: nearly every bird too was noticed in the Golden-pencilled classes. The first won well, being a perfect gem; second admirable in all points; third we did not like so well as 634 (Cresswell), or 631 (Duckworth). The cup hen was a marvel; we never remember such even pencilling. Second and third were marked birds, but a long way from the first. 647 (Bloodworth), nicely marked; 661 (Mitchell), rather too deep in colour, or else good; 654 (Rollinson), we should have liked to have seen higher. The winning Silver-pencils were capital. The first cockerel had a splendid tail, and was in beautiful condition. We fancy the second was a little wry-tailed; it looked very suspicious. 672 (Webster), had a good tail. The first hen ran in easily; the second was good in all but comb; third a nicely marked bird. Blacks made two good classes, the hens especially. The winning cockerel was good in comb and very red in face, but a little heavy-looking; the second was very fine in colour and good in ears; the third, too, we liked immensely. 687 (Beldon), was very lustrous, and 691 (Bush), a good showy bird. The winning hen was of beautiful shape and colour, but her comb was a little too high at the back; second well placed; third a neat bird. 710 bad in comb, or else of fine colour; 701 (Kilvert), a good, smart pullet.

Polish.—The quality of the winning pens was very good. The Gold cock which won the cup we never saw equalled. The second was a beautiful Silver, and the third also a smart Silver. 839 was a nice White-crested Black. 842 was a beautiful cock, and must have closely approached the third. 846 (Feast), a rich gold, but poor crest. In hens the Silver hen which was first also won the cup for best Polish, Malay, or French hen. She is a great beauty, and was well shown. The second was a fine Gold hen, and the third a Silver with wonderful markings. 856 (Adkins), a beautiful Silver. We were so sorry not to see more White-crested Blacks; we feel this breed wants looking to, or it will be one of the past; it seems gradually slipping from all the exhibitions. We rely on Mr. Beldon, with his great Polish knowledge and experience, doing something for this strikingly handsome breed, and so preventing its dying out.

French.—These made four good classes, Houdans and Crêves mustering well. In Houdan cocks the winner was very large, of great depth and style. The second very dark, and generally good. The third grand in colour and crest. 863 (Dring), a very stylish bird. 865 (Quibell), large in crest and square. 872 (Browne), large, but poor in crest. 876 (Handley), very large indeed. 879 (Handley), splendid in shape. The first hen was very light but good, being large and square. The second also light in colour but large. The third a beautifully marked bird. 893 (Hill), a good large hen. 886 (Quibell), a good dark hen. The winning Crêve cock was splendid; second also good; third fine La Flèche. 910 (Dring), a large bird. 920 (Greenhill), a fine deep-bodied cock. In hens again Mr. Crabtree won with a

beauty; the second was close upon her, however. Third, a fair bird. 933 (Fowler), large and with fine crest, but too much white in it. This class we thought very good.

Malays.—There were two good classes, but hardly so well filled as we had hoped to see. The first cock is an old friend and a great beauty; second much smaller, but good in plumage; third also rather small, but of good quality. The winning hen was capital, being good in plumage and condition. One was very dark and a good size; second a smart dark bird; third pressing close on second. 836 (Rooth), a very fine bird.

Leghorns.—This variety is gradually getting more popular. The birds here were very good. The winning cockerel of admirable colour, and well shown; the second was good, but wanted washing; third a smart Brown. 935 (Ward), dirty, but good in quality; 936 a good Brown. The first hen walked in, being in beautiful condition and very showy; second a very brilliantly coloured Brown; third a capital, well-known White. 950 (Jacomb), grand in comb and head, but rather small; 954 (Fowler), a smart White.

Game Bantams.—In Black-breasted and other Reds the winners were well placed, and looked very smart pens, all being Black Reds. The cup pen especially good. In the next class exquisite Piles won first, and nice Duckwings second and third. The winning Piles were very good in shape, but very dirty. In the single cock class a good smart Pile won the cup, with a beautiful head and of charming shape. Besides the winners there was not much worthy of note in this class.

Black *Bantams* were a large and very good class of twenty-two pens. The Secretary, Mr. Cambridge, did not contend for the prizes, though the superior merit of his birds is well known. The two first pens were very good, there being but little to choose between them, the first containing by far the best hen, while the second held the best cockerel. The third-prize pair also small and neat. 1104 (Shackleton), very good indeed; 1107 (Tindal), cock's earlobe too large, otherwise good. It is perfectly astonishing how the Sebrights have improved in the last two years, twelve pens of these little gems being shown here, and hardly a bad bird amongst them. The awards of the Judge were not very favourably received, it being generally considered that Mr. Leno's two pens and Mr. Hodson's Silver chickens were the pick of the class. The first-prize birds have been a good pen, but the lacing on the cock's breast has moulted-out very badly, and now seems more spangled than laced. The second-prize birds were Golds, but far too heavily laced. Third fair Silvers. Not a single pair of the old creamy Silvers were to be seen. What an improvement! White Bantams were a very poor class. Mr. Tearle's pens were empty. Mr. Beldon's were the only birds in the class that had not stained earlobes.

Waterfowl.— Aylesbury Ducks, only three pens competing, and they were well placed. We were most sorry not to see more entries in this class. The Rouens were much better, the cup pen being very fine in shape and colour. This pen weighed 16 lbs.; the second and third both weighed 17 lbs., and were also capital pens. 1006 (Stott), a very good pen; 1022 (Harvey), seemed close on the third. Black East Indians were beautiful, and we were much pleased with the judging. The Judge, we know, took every possible trouble over them, and his awards seemed most correct. We stand up for colour and shape before mere smallness of size. There were two pens in this class very highly commended which were not marked in the catalogue—viz., 1026 (Sainsbury) and 1028 (Hayne). Mr. Sainsbury's colour is simply exquisite, though certainly Mr. Kelleway's are rather smaller; the third Duck we admired immensely. In the fancy class Japanese Teal won the cup, and looked very pretty. Beautiful Carolinas second and third. We thought Mr. Leno's, however, quite equal to them. The winning Geese were very good, and weighed 53, 41, and 41 lbs. per pen respectively, while the Turkeys weighed 56, 36, and 36 lbs. each. They were three very fine pens, and were well placed, apart from their actual weights.

THE PIGEONS.

These numbered 640 pens, and the point cups were awarded as follows:—That for ten guineas to Mr. Fulton, with 139 points; that for five guineas to Mr. N. Hill, with 103 points. Proceeding in the order of the catalogue I coms to the *Carriers*, and if there was any fear a few years since that these birds were becoming restricted in their admirers, all such fear is at an end, for ninety pens are before me. Old cocks, Black or Dun.—First-and-cup (Horner), a first-rate colour, but second (Fulton), better in head. Third, Black with mandibles far apart. Of the fifteen pens more than half were deservedly noticed. Old hens, Black or Dun.—This an excellent class of fourteen birds. First and third Blacks, and second a good Dun, a particularly nice bird. Old cocks, any colour.—The majority of these were, as might be supposed, Blue, but one White (1454) good enough to get a commendation, while 1458 was marked a Chequer, but lacked the dappled look, being rather a Black with snatches of blue coming through, but, persevered in, good Chequers might be shown. The prizes went to Blues. Second better than first. Pen 1459 (Horner), commended, a good Blue, save that the bars were a little indistinct. Old hens, Any other colour.—First (Horner), a very nice Carrier, Blue, like second and third. There was a Silver brown-barred which might have been shown among Dragoons.

Young Carrier cocks, Any colour.—These showed a wonderful advance at a Bristol Show. First-and-cup a good bird, Dun, and no mistake. Young Carrier hens.—First (Maynard), a capital Dun; so also Mr. Maynard's highly commended pen 1494. Second, Black with a particularly good beak. Third, same owner (Massey), good again.

Pouters.—Fifty pens in all, against the eighteen of last year; verily this is an advance, and the noble Pouter is now to be met with in goodly numbers south of the Tweed. As to the judging of the Pouters there was much discussion, and I think that the prizes would have gone differently in some cases had the birds been put in a judging pen as in Scotland, which is by far the best plan, for comparison in Pouters is necessary, and they are best compared by being placed together. In separate pens they cannot easily be rightly judged, now that happily the tape-line is not the sole guide. Pouter cocks, Black or Blue, any age.—First-and-cup (Yardley), a little too stout for a Blue, but good in colour and leg-feathering. Now, strange to say there was Mr. Bullen's Palace cup bird unnoticed, though very graceful and slender for a Black but honestly shown, the black left in the thighs, and therefore I suppose Mr. Bullen lost, for it was a far superior bird to the first. The third-prize (Hills), had been twice first at Palace and at Glasgow and Oxford, but only third here! No. 1521 a nice bird. Pouter hens, Black or Blue, any age.—A famous class. First, large Blue hen (Bullen); second, same owner, first at Palace, second here; third, Bullen again, a Black somewhat short in limb. 1525, highly commended (Horner), a pretty but pale bird. 1526, highly commended (Fulton), a good bird with beautiful bars. 1532, very highly commended (Bullen), a wonderfully fine Blue bird, only four months old. What will she not be presently? Pouter cocks, any colour and age.—First, Yardley; second, a good Red; third, a pale Yellow. 1535, very highly commended (Fulton); perhaps the very best bird in the class. Pouter hens, any colour and age.—First and second Bullen; third (Hill), a good yellow hen, better than second to my judgment, but oh, strange turn of fortune! there was Mrs. Ladd's lovely white hen, first at Oxford, a bird of exquisite style, only commended here. Oh, for a judging pen!

Almond Tumblers.—Thirteen pens. The real contest lay between Fulton and Yardley, and the latter won the cup. Eight pens were noticed. Any variety of Shortfaces showed about twenty pens of most variously feathered birds—Agates, Kites, Baldheads, and Mottles, but much could not be said for any save the noticed birds.

Fourteen pens of Foreign *Owls*. The *Barbs* of all ages were numerous, the old cocks being the best. Old indeed were some. 'Tis a pity this class shows age so sadly. "Old, Master Shallow! without doubt he's old," I said, whilst looking at some of the watery-eyed old gentlemen. I think some of these are actually unpleasant to look at, and ought to be kept at home, and not sent from show to show.

The *Trumpeters* were but five, but very choice. First-and-cup (Lederer), a noble Mottle.

Jacobins again were good, and it is pleasant to see this bird improves in colour and shape, the dark colour reaching quite to the thighs and over, and the baldhead look gone. Then the length of the bird! and a certain gracefulness in shape with the length is now seen, as at Bristol. A lovely White and good Black appeared, with many excellent Reds. The Black was the first-prize hen, the White the second-prize hen, and, their pens being side by side, the birds showed well, by contrast of colour, each other's beauties.

Fantails were a rough lot.

Turbits very abundant, and many very good.

The English *Owls* were "an extraordinarily good class," and showed that all fears of these fine birds being "lost to sight, though to memory dear," are groundless. It is well that the rage for the delicate African has much subsided; a large, bold variety of bird is quite as much to be admired as an extremely small and tender one.

Nuns and *Magpies*, especially the latter, were good.

That old favourite the *Dragoon*, now as popular as ever, was well to the front, for upwards of ninety birds were exhibited. The greater number were of the London style; and many of the prize birds (and most beautiful in colour most of them were), were very large and even heavy-looking. First hen (W. Hill), a beautiful Yellow; second (Graham), as beautiful a Red, both very heavy birds, which is not to my taste; but once accept the style as correct, they were splendid birds. The Blues were exceedingly good, particularly in colour. Reserving to myself my own ideas of the Dragoon, I own I rejoiced to see such a splendid show of birds, elegant, and bold, and sound in colour, call them what you will, whether Dragoons or Horsemen.

The Short-faced *Antwerps* appear to be fading away before their Long-faced brethren, birds of utility, and at this time very popular.

In the Any variety class were many pretty Toys, the first prize going to a good black Turbiteen; this colour best suits this variety. When the patch on the face is yellow or red, the bird looks so like a clown with his red-marked cheeks. A good Archangel second.

Save in the Selling class the Pigeons were shown in single birds, and the idea, a pleasant one, of "a Pigeon pair" is lost.

Now that that baneful spell "Bristol Show weather" is at last broken, and fine mild weather has succeeded to the direct opposite, and the Show has proved a success, we may anticipate a series of triumphs, for contrary to the general impression, arising no doubt from the pens belonging to the late Committee being for sale, *the Show is to be continued:* and we may expect, with full confidence, that the great treat to west-country fanciers, the Bristol Show, will continue to be their treat, yea, and their increasing treat. We are all this year deeply indebted to Mr. Cambridge, without whose perseverance, in face of great difficulties, show there would have been none.—WILTSHIRE RECTOR.

DORKINGS (Coloured).—*Cockerel.*—1 and Cup, C. Widdas, Beechburn Grange. 2, Rev. G. F. Hodson, North Petherton. 3, Rev. H. F. Hamilton, Combe St. Nicholas. *c*, B. C. D. Greenhill, Puriton; Mrs. Radclyffe, Wareham. *Pullet.*—1, Henry Lingwood, Barking, Needham Market. 2, G. Collis, West Stratton. 3, Rev. E. Bartrum, Berkhampstead. 4, Mrs. T. Pope, Corsley. *vhc*, O. E. Cresswell, Early Wood, Bagshot. *c* C. Widdas; C. Pilkington; Rev. H. F. Hamilton; J. K. Fowler, Aylesbury; W. H. Denison, Hardwicke.

DORKINGS (Coloured).—*Cock.*—1 and 3, Rev. H. F. Hamilton. 2, R. W. Beachy, Fluder. *hc*, Rev. E. Bartrum. *c*, O. E. Cresswell; R. W. Beachy. *Hen.*—1, Cup, and 2, Rev. E. Bartrum. 3, R. W. Beachy. *hc*, A. E. W. Darby, *c*, G. Collis; S. Newick, Hinton St. George; W. H. Denison.

DORKINGS (Silver-Grey).—*Cockerel or Cock.*—1, O. E. Cresswell. 3, B. St. J. Ackers, Painswick. *Pullet or Hen.*—1, H. T. Sotham, Water Eaton. 2, C. Wren, Lowestoft. 3, T. Moore. *hc*, O. E. Cresswell. *c*, W. W. Ruttlidge, Northend; O. E. Cresswell; W. H. Denison; B. St. J. Ackers.

DORKINGS (White).—*Cockerel or Cock.*—1, Mrs. M. A. Hayne, Fordington. 2, Mrs. Rolls, Monmouth. 3, Miss E. Williams, Henllys, Berriew. *hc*, W. Badger, Little Ness. *c*, O. E. Cresswell; Mrs. M. A. Hayne; Mrs. A. Tindal, Aylesbury. *Pullet or Hen.*—1, J. Robinson, Sunderland. 2, O. E. Cresswell. 3, A. E. W. Darby. *vhc*, Mrs. A. Tindal. *hc*, Mrs. M. A. Hayne. *c*, Mrs. M. A. Hayne; H. T. Sotham.

COCHINS (Cinnamon or Buff).—*Cockerel.*—1, Lady Gwydyr. 2 and 3, W. A. Burnell. *hc*, Mrs. Bentley; C. Bloodworth; J. Bloodworth, Cheltenham; J. Cattell, Birmingham; R. P. Percival, Manchester; Mrs. A. Tindal; H. Mappebeck; A. E. W. Darby; H. Shutt, Stourbridge. *Pullet.*—1, Lady Gwydyr. 2, W. A. Taylor, Manchester. 3, Mrs. A. Tindal. *hc*, W. H. Crabtree, Manchester; J. Cattell; Mrs. A. Tindal; Lady Gwydyr, Ipswich; A. E. W. Darby; W. A. Burnell, Southwell; J. Swinson, Chipping Campden.

COCHINS (Cinnamon or Buff).—*Cock.*—1 and Cup, W. A. Burnell. 2, H. Tomlinson, Birmingham. 3, J. K. Fowler, Aylesbury. *hc*, S. R. Harris, St. Day; J. Cattell; Mrs. A. Tindal (2); H. Mappebeck, Birmingham; Lady Gwydyr; W. A. Burnell. *Hen.*—1 and 3, W. A. Taylor. 2, C. Bloodworth, Cheltenham. *vhc*, J. Bloodworth; H. Robinson, Sheffield. *hc*, W. A. Burnell; A. E. W. Darby; W. E. Smith, Cheltenham.

COCHINS (Brown or Partridge).—*Cockerel.*—1, Mrs. A. Tindal. 2, W. A. Taylor. 3, G. Shrimpton. *vhc*, G. Shrimpton, Leighton Buzzard; J. K. Fowler. *hc*, R. Jones, Neath; E. Tudman, Salop. *Pullet.*—1, E. Tudman. 2, Mrs. A. Tindal. 3, R. P. Percival. *vhc*, R. Jones. *hc*, H. Moore, Tiverton; T. Stretch, Ormskirk; Mrs. A. Tindal; G. Shrimpton; Hon. Mrs. Sugden.

COCHINS (Brown or Partridge).—*Cock.*—1 and 2, W. A. Taylor. 3, T. Stretch. *hc*, W. H. Crabtree; Lady Gwydyr; E. Tudman; C. Sedgwick, Keighley. *Hen.*—1, Mrs. A. Tindal. 2, W. A. Taylor. 3, J. N. C. Pope, Bristol. *vhc*, E. Tudman. *hc*, T. Aspden, Church; F. Wilton, Gloucester; J. Wood, Chorley (2); W. A. Taylor.

COCHINS (White).—*Cockerel.*—1, Mrs. A. Williamson. 2, R. P. Percival. 3, R. S. S. Woodgate, Tanbridge Wells. *hc*, S. R. Harris; Mrs. A. Williamson, Leicester; J. Bloodworth; Mrs. A. Tindal; J. K. Fowler. *Pullet.*—1, W. Whitworth, jun., Longaigh. 2, Mrs. A. Williamson. 3, W. F. Nalder. *vhc*, C. Bloodworth; W. A. Burnell; J. N. Whitehead; J. K. Fowler; R. S. S. Woodgate *hc*, J. N. Whitehead, Bridgewater.

COCHINS (White).—*Cock.*—1 and 3, R. S. S. Woodgate. 2, J. Turner, Bath. *hc*, C. Bloodworth; R. P. Percival. *Hen.*—1 and Cup, Mrs. A. Williamson. 2, W. A. Burnell. 3, J. Turner. *vhc*, R. S. S. Woodgate. *hc*, W. Whitworth, jun.; H. Feast, Swansea; R. S. S. Woodgate.

BRAHMAS (Dark).—*Cockerel.*—1 and Cup, R. P. Percival. 2 and 4, T. F. Ansdell, St. Helens. 3, Horace Lingwood, Needham Market. *vhc*, L. Wright, Crouch End, London, N.; H. Robinson, Baildon. *hc*, Hon. Miss D. Pennant, Bangor (2); E. Ensor; Newsham & Manby, Wolverhampton; J. K. Fowler. *c*, E. Ensor, Bristol; J. F. Smith; O. E. Cresswell; J. Brookwell, Wigan. *Pullet.*—1, M. Leno, Dunstable. 2, Horace Lingwood. 3, Newnham & Manby. 4, White & Shuter, Wilmington. *vhc*, Hon. Miss D. Pennant; E. Ensor; Mrs. Vigor, Uxbridge; J. Evans; Newnham & Manby. *hc*, Hon. Miss D. Pennant; Mrs. M. A. Hayne; J. Brookwell. *c*, J. F. Smith, Sheffield; A. Feast; G. F. Whitehouse, Birmingham.

BRAHMAS (Dark).—*Cock.*—1 and 3, T. F. Ansdell. 2, Newnham & Manby. *vhc*, Horace Lingwood; R. P. Percival; J. Evans. *hc*, J. F. Smith; L. Wright; F. J. Cotterel, Birmingham (2); J. Evans. *c*, Rev. J. Watson, Exeter; Rev. C. W. Cox, Stratford-on-Avon. *Hen.*—1 and Cup, W. H. Crabtree. 2, T. F. Ansdell. 3, L. Wright. *vhc*, Rev. J. D. Peake, Laleham Vicarage, Chertsey; E. Ensor; L. Wright; T. F. Ansdell; J. Evans (2). *hc*, W. H. Crabtree; Lady Gwydyr. *c*, Lady Gwydyr; E. Pritchard, Wolverhampton.

BRAHMAS (Light).—*Cockerel.*—1, Horace Lingwood. 2, P. Haines, Palgrave, Diss. 3, Mrs. A. Williamson. *hc*, E. Seammell, Trowbridge; W. J. Ford, Leicester; Mrs. A. Williamson; P. Haines. *c*, Mrs. A. Williamson; C. Tottle, Bristol. *Pullet.*—1, Horace Lingwood. 2, H. C. White. 3, R. Bird. 4, T. A. Dean, Hereford. *vhc*, P. Haines; F. Crook, Forest Hill. *hc*, S. P. Broad, Reigate; P. Haines; R. Bird, Fulham, London (3); W. Tedd, Erdington. *c*, H. C. White.

BRAHMAS (Light).—*Cock.*—1, T. A. Dean. 2, W. H. Crabtree; Rev. G. Watson. *hc*, T. Webb, Colefield; Horace Lingwood; J. Bloodworth; R. P. Percival; T. A. Dean. *c*, H. M. Mayoard, Isle of Wight; F. J. Cotterell. *Hen.*—1, Mrs. A. Williamson. 2, F. J. Cotterell. 3, W. H. Crabtree. *hc*, Mrs. A. Williamson; R. P. Percival; J. Turner; T. A. Dean; Rev. G. Watson; Mrs. Rolls, Monmouth. *c*, S. P. Broad, Plymouth; J. Turner.

SPANISH.—*Cockerel.*—1 and Cup, Ellis & Parsley, Bristol. 2, J. R. Rodbard, Wrington. 3 and 4, Miss E. Browne, Chard. *vhc*, J. Leeming, Broughton; E. Jackson, Finchfield; J. Walker, Standford; Miss E. Browne; Mrs. E. Allsopp, Worcester; J. Boulton, Bristol (2); G. K. Chilcott, Bristol. *hc*, P. F. Le Sueur, Jersey; J. R. Rodbard (2); E. Jones (2); D. M. Mills. *Pullet.*—1 and Cup, Miss E. Browne. 2, J. Walker. 3, Mrs. E. Allsopp. 4, J. Leeming. *vhc*, G. K. Chilcott. *hc*, G. K. Chilcott; P. F. Le Sueur; J. Thresh, Bradford; J. Palmer; E. Jones; Mrs. Tonkin. *c*, P. F. Le Sueur; J. Walker; W. Jarrett.

SPANISH.—*Cock.*—1, E. Jones. 2, T. Bamfield, Bristol. 3, G. K. Chilcott. *Hen.*—1, J. Leeming. 2, E. Jones. 3, T. Bamfield. *vhc*, Mrs. J. K. Bartrum, Chippenham. *hc*, G. K. Chilcott; E. Jackson; T. Bamfield; J. Thresh. *c*, J. R. Rodbard.

HAMBURGHS (Gold-spangled).—*Cockerel or Cock.*—1 and Cup, T. Dean. 2, H. Beldon, Bingley. 3, J. Buckley, Tannton. *vhc*, G. & J. Duckworth; H. Beldon. *hc* J. Robinson; W. A. Hyde, Ashton-under-Lyne (2); J. Rollinson, Lindley. *Pullet or Hen.*—1, T. Dean. 2, J. Buckley. 3, J. Walker. *vhc*, Duke of Sutherland, Stoke-on-Trent. *hc*, H. Beldon (2); J. Robinson, Garstang; J. Rollinson; Hodges & Rogers, Bristol; W. A. Hyde.

HAMBURGHS (Silver-spangled).—*Cockerel or Cock.*—1, H. Beldon. 2, J. Fielding, Manchester. 3, Duke of Sutherland. *vhc*, S. Elliott, jun., Liskeard; Ashton & Booth, Mottram. *hc*, H. Beldon; J. Carr, Swansea. *Pullet or Hen.*—1, J. Rollinson. 2, Ashton & Booth. 3, H. Beldon. *vhc*, G. & J. Duckworth; J. Robinson; Miss E. Browne; J. Walker; G. C. Holt. *hc*, Duke of Sutherland; G. C. Holt, Lawton; J. Fielding.

HAMBURGHS (Gold-pencilled).—*Cockerel or Cock.*—1, J. Walker. 2, H. Beldon. 3, J. Robinson. *vhc*, O. E. Cresswell (2); H. Beldon. *hc*, G. & J. Duckworth; J. Rollinson; W. Dixon, jun., Shipley Colliery; T. Wild, jun., Melton Mowbray; Mrs. W. E. George, Bristol; H. Feast. *Pullet or Hen.*—1 and Cup, H. Beldon. 2, W. Clayton, Keighley. 3, J. Walker. *vhc*, H. Beldon; J. Rollinson; W. Dixon, jun.; J. Walker. *hc*, S. Elliott, jun.; C. Bloodworth; G. & J. Duckworth; O. E. Cresswell; H. Feast; J. Mitchell, Moseley (2).

HAMBURGHS (Silver-pencilled).—*Cockerel or Cock.*—1, H. Beldon. 2, R. W. Bracewell, Earby, Skipton. 3, J. Robinson. *vhc*, H. Feast. *hc*, H. Beldon; Duke of Sutherland; J. Webster, Colne (2). *Pullet or Hen.*—1, H. Beldon. 2, J. Rollinson. 3, Duke of Sutherland. *vhc*, R. W. Bracewell. *hc*, H. Beldon; W. Dixon, jun.

HAMBURGHS (Black).—*Cockerel or Cock.*—1, J. Walker. 2, H. Beldon. 3, Ashton & Booth *vhc*, J. Patrick, Stacksteads; H. Beldon. *hc*, H. Robinson; T. Bush, Bristol. *Pullet or Hen.*—1 and *vhc*, T. Bush. 2, H. Beldon. 3, J. Patrick; J. Walker. *hc*, J. Robinson; H. Beldon; J. M. Kilvert, Salop; Stott & Booth, Bury; E. Leake, Bromfield; H. Feast; R. S. S. Woodgate.

GAME (Black-breasted Reds).—*Cockerel or Cock.*—1, J. Nelson, Hexham. 2, S. Matthew, Stowmarket. 3, W. J. Pope. *hc*, J. Forsyth, Wolverhampton; G. Doubleday, Southwell; Rev. H. H. Helyar, Pendomer Rec. Yeovil; W. H. Stagg, Pewsey; S. A. Beck, Welshpool; C. T. Salisbury, Newport. *c*, J. Palmer. *Pullet or Hen.*—1 and Cup, W. J. Pope, Biggleswade. 2, S. Matthew. 3, H. Phelps, Yeovil. *hc*, W. H. Stagg (2); Rev. H. Helyar; W. J. Pope. *c*, R. H. Tyte, Minchinhampton.

GAME (Brown-breasted Reds).—*Cockerel or Cock.*—1 and Cup, S. Matthew. 2, J. Palmer. 3 and *vhc*, J. T. Browne. *hc*, Miss Osborn, Yarnton; D. Clayton, Bradford. *Pullet or Hen.*—1, D. Harley. 2, W. C. Phillips. 3, J. T. Browne. *hc*, J. Palmer; C. H. Wolff, Altrincham (2); W. C. Phillips, Worcester.

GAME (Any other variety).—*Cockerel or Cock.*—1, J. T. Browne. 2, W. C. Phillips. 3, S. Matthew. *hc*, J. Ascroft; B. Mollett, Hunstanton; J. T. Browne; W. Dabell, Southwell; J. Cock, Worcester. *Pullet or Hen.*—1, J. Nelson. 2, J. Goodwin, Liverpool. 3, H. Feast. *hc*, J. Ascroft; Hon. and Rev. F. Duttoo, Bibury Vicarage, Circocester; J. Cock.

MALAY.—*Cockerel or Cock.*—1, J. Hinton, Warminster. 2, F. Sabin, Birmingham. 3, Rev. N. J. Ridley, Newbury. *Pullet or Hen.*—1, J. C. Baker, Bridgewater. 2, Rev. G. F. Hodson. 3, J. Hinton. *hc*, Rev. N. J. Ridley; F. Sabin; T. Joint, Barnstaple. *c*, J. S. Booth, Chesterfield.

POLISH.—*Cockerel or Cock.*—1, Cup, and 2, H. Beldon. 3, G. C. Adkins. *vhc*, J. Hinton. *hc*, G. C. Adkins, Birmingham (2); H. Feast. *c*, G. J. Lenny, Lewes. *Pullet or Hen.*—1 and Cup, G. C. Adkins. 2 and 3, H. Beldon. *vhc*, G. C. Adkins (3); A. & W. Silvester, Sheffield. *hc*, T. Dean.

HOUDANS.—*Cockerel or Cock.*—1, W. Whitworth, jun. 2, D. Lane. 3, J. K. Fowler. *hc*, W. O. Quibell, Newark; F. Wilson; S. W. Thomas; O. A. Browne, Exeter; M. H. Sturt, Pewsey; Rev. E. Handley, Glastonbury (2); J. B. S. Mais, Bristol; G. D. Harrison, Cane. *Pullet or Hen.*—1, G. D. Harrison. 2, M. H. Sturt. 3, W. O. Quibell. *vhc*, W. O. Quibell; D. Lane. *hc*, W. Dring, Faversham; Mrs. D. Lane; F. Wilton; W. Whitworth, jun.; Rev. E. Handley; J. B. S. Mais; Rev. A. E. Viner, Cheltenham; D. Lane.

FAWNCH (Any other variety).—*Cockerel or Cock.*—1, W. H. Crabtree. 2, Miss Mortimer, Ross. 3, Mrs. A. Tindal. *hc*, W. Dring; Rev. N. J. Ridley; H. Feast; R. C. D. Greenhill. *c*, Mrs. E. E. Llewellyn, Bridgend. *Pullet or Hen.*—1, W. H. Crabtree. 2, H. Feast. 3, M. H. Sturt. *hc*, W. Dring; Mrs. E. E. Llewellyn; J. K. Fowler.

LEGHORNS.—*Cockerel or Cock.*—1, R. R. Fowler. 2, A. Ward, Wimpole Street, London. 3, S. C. Bradbury, Gloucester. *hc*, A. Ward; A. Kitchen, Westerham. *Pullet or Hen.*—1, A. Ward. 2, S. L. Bradbury. 3, R. R. Fowler. *hc*, A. Kitchen; Miss Jacomb, Harrow-on-the-Hill; R. R. Fowler.

ANY OTHER DISTINCT VARIETY.—*Cockerel or Cock.*—1, Lady Gwydyr. 2, H. Feast. 3, W. Badger (Black Cochin). *hc*, S. P. Broad (Silky); W. & T. Holt, Oswaldtwistle (Black Cochin); H. Frankland; Mrs. Taaffe, Tulsk (Black Cochin); J. Croote, jun., Wellington (Minorca); J. Isard, Wokiogham (Cuckoo Dorking); Miss C. E. Palmer (Scotch Dumpies); T. A. Bond, Londonderry (Black Cochin). *c*, H. Beldon; J. Watkins (Friesland). *Pullet or Hen.*—1, W. and T. Holt (Black Cochin). 2, T. Aspden (Black Cochin). 3, H. Feast. *hc*, H. Beldon; S. P. Broad (Silky); W. Jeffries, Bridgwater (Minorca); J. Turner (Black Cochin); Lady Gwydyr; G. Dingley, Warwick (Indian Game); T. Jones (Minorca); A. E. W. Darby (Black Cochin); T. A. Bond (Black Cochin).

DUCKS (White Aylesbury).—1, J. K. Fowler. 2, H. Feast. 3, Miss Dickinson, Tauotoo.

DUCKS (Rouen).—1, Cup, and 2, W. Evans. 3, J. N. C. Pope. *vhc*, W. F. Harvey, Canterbury. *hc*, S. H. Stott; J. N. C. Pope. *c*, W. Meanley, Birmingham; J. Brookwell; T. Moore.

DUCKS (Black East Indian).—1 Cup, and 2, G. S. Sainsbury. 3, Mrs. M. A. Hayne. *vhc*, G. S. Sainsbury; Mrs. M. A. Hayne. *hc*, J. W. Kelleway, Isle of Wight. *c*, J. W. Kelleway (2); G. S. Sainsbury.

DUCKS (Any other variety).—1 and Cup, M. Leno. 2 and 3, C. H. Maye, Dorchester. *vhc*, M. Leno. *hc*, W. Boutcher, Notting Hill, London. *c*, W. Boutcher; M. Leno.

GEESE.—1, J. K. Fowler. 2, A. Sperrin, Bittern. 3, Capt. C. Anyon, Chorley. *c*, Hon. Mrs. Colville, Burton-on-Trent.

TURKEYS.—1 and *hc*, Rev. N. J. Ridley. 2, J. W. Morison, Pembroke. 3, A. Martin, Dover.

BANTAMS (Game, Black-breasted and other Reds).—1 and Cup, W. F. Addie, Preston. 2, J. R. Robinson. 3, J. Nelson. *hc*, G. Hall, Kendal; T. W. Anns, Clapham; J. Ferry; W. Adams. *c*, G. Hall.

BANTAMS (Game, any other variety).—1, W. F. Addie. 2, J. R. Robinson. 3, G. Hall. *hc*, R. Brownlie; W. Hodgson. *c*, J. M. Otter, Balderston.

BANTAMS (Black Clean-legged).—1 and Cup, Milner & Beanland. 2, H. Beldoo. 3, G. R. Francis, Romford. *hc*, W. H. Robinson. *c*, T. Davies, Bristol; W. H. Shackleton, Bradford.

BANTAMS (Gold and Silver Sebrights).—1 and Cup, C. H. Poole, Bridgwater. 2 and 3, Mrs. Wootton, Mapperley. *hc* and *c*, M. Leno.

BANTAMS (White Clean-legged).—1, H. Beldon. 3, J. Bloodworth.

BANTAMS (Game).—*Cock.*—1, Cup, and *hc*, J. R. Robinson. 2, J. Nelson. 3, G. Hall. *vhc*, R. Brownlie.

SELLING CLASSES.

DORKINGS, COCHINS, OR BRAHMAS.—*Cockerel or Cock.*—1, J. Weston, Aylesbury (Dark Brahmas). 2, J. Bloodworth. 3, M. Leno (Brahma). 4, T. F. Ansdell (Brahma). *vhc*, H. Tomlinson (Buff Cochin). *hc*, A. E. W. Darby (White Dorking); A. Sperrin (Dorking); W. A. Burnell (Buff Cochin). *c*, Mrs. C. Smith, Calne (Silver-Grey Dorking); B. Ackers (Silver-Grey Dorking); Rev. T. E. De Sprye, Bristol (White Cochin); S. H. Lloyd, Maghull (Light and Dark Brahmas); T. Herrieff, Slough (Dark Brahma). *Hens or Pullets.*—1, G. Jones (Dark Brahma). 2, W. A. Burnell (White Cochin). 3, A. Sperrin (Dorking). 4, E. Pritchard (Dark Brahma). *vhc*, Mrs. Vigor (Dark Brahma). *hc*, Rev. G. F. Hodson (Dorkings); E. T. Jones (Dark Brahma). *c*, H. Yardley, Birmingham; Mrs. M. A. Hayne (White Dorking); B. Ackers; J. Bloodworth; H. Ferris, Weston-super-Mare (White Cochin); Rev. J. D. Peake (Dark Brahma); J. R. Rodbard (Light Brahma).

ANY OTHER VARIETY EXCEPT BANTAMS.—*Cockerel or Cock.*—1, E. Jones (Spanish). 2, Rev. A. E. Viner (Houdan). 3, Mrs. A. Tindal (Game). *vhc*, J. R. Rodbard (Spanish); Miss E. Browne (Hamburgh). *hc*, J. R. Rodbard (Spanish);

J. S. Rooth (Malay). *c*, G. K. Chilcott (Spanish); Ellis & Parsley (Spanish); E. Jones (Spanish); Mrs. W. Lyon, Newbury (Houdan); M. H. Sturt (Crève-Cœur); J. Mason (Indian Game); J. Hinton (Malay) *Pullets or Hens.*—1, J. Walker (Spanish). 2, J. Hinton (Polands). 3, H. F. Price, Weston-super-Mare. *hc*, G K. Chilcott (Spanish); J. Boulton (Spanish); J. R. Rodbard (Spanish); T. Sheen, Aylesbury (Spanish); W. Jarrett, Bristol (Spanish); Mrs. Tonkin (Spanish); Miss E. Browne (Hamburgh); T Southerden, Bristol (Black Hamburgh); W. Burrows, Diss (La Flèche); Miss Woodham, Romsey (Houdan); Miss E. Williams (Crève-Cœurs). *c*, C. Bloodworth (Gold-pencilled Hamburgh); P. Hanson, Gloucester (Hamburgh).

BANTAMS (Any variety).—*Cock.*—1, T. Rush (Black). 2, A. Ashley, Worcester. 3, J. W. Lloyd (Laced). *hc*, J. Forsyth (Game); T. Barker (Game); G. Hall (Game); J. W. G. Nickols, Bow, London; M. Leno (Laced); J. Lewis, Bristol (Black). *c*, T. E. Thirtle, Lowestoft (Black); R. Greig, Amesbury (Black Japanese). *Hens.*—1, J. Lewis (Black) 2, J. Bloodworth. *vhc*, G. Hall (Game). *hc*, S. Beighton, Southwell (Game); J. W. Lloyd (Laced). *c*, F. Shumach, Southwell (Game); R. Greig (Black Japanese).

PIGEONS.

CARRIERS (Black or Dun).—*Cock*,—1 and Cup, E. Horner, Harewood. 2, R. Fulton, Brockley, London. 3, H. Yardley. *vhc*, R. Fulton; E. Horner. *hc*, R. Fulton; J. James, Bath; Mrs. S. H. Carter; N. Hill, Ealing. *Hen.*—1, H. Yardley. 2, R. Fulton. 3, N. Hill. *vhc*, R. Fulton. *hc*, G. Kempton, Islington, London; J. James; R. Fulton; E. Horner. *c*, S. H. Carter, Farnham; E. Horner; N. Hill.

CARRIERS (Any other colour).—*Cock.*—1, E. C. Stretch, Ormskirk. 2 and *hc*, R. Fulton. 3, E. T. Dew, Weston-super-Mare. *c*, T. Crisp, Southall (2); E. C. Stretch; E. Horner. *Hen.*—1, E. Horner. 2 and 3, E. T. Dew. *c*, E. C. Stretch; R Cant, London.

CARRIERS (Any colour).—*Young Cock.*—1 and Cup, A. Billyeald, Nottingham. 2, R. Fulton. 3, E. Horner. *vhc*, H. M. Maynard; Col. F. Hassard, Sheerness. *hc*, R. Fulton; E. Horner. *c*, H. Creshy, Sale; W. Massey, Spalding. *Young Hen.*—1, H M Maynard. 2 and 3, W. Massey. *vhc*, R. Cant. *hc*, H. M. Maynard; Col. F. Hassard. *c*, R. Fulton; E. Horner.

POUTERS (Black or Blue).—*Cock.*—1 and Cup, H. Yardley. 2, 3, and *c*, N. Hill. *vhc*, R. W. Bryce. *hc*, R. Fulton; W. Bryant, Bath; E. Horner; Rev. W. C. Bullen; N. Hill. *Hen.*—1, 2, 3, and *vhc*, Rev. W. C. Bullen. *hc*, R. Fulton (2); E. Horner (2), *c*, N. Hill (2).

POUTERS (Any other colour).—*Cock.*—1, H. Yardley. 2 and *vhc*, R. Fulton. 3, N. Hill. *hc*, R. Fulton; Mrs. Ladd, Calne. *c*, T. Herrieff; E. Horner; N. Hill. *Hen* —1 and 2, Rev. W. C. Bullen. 3, N. Hill. *vhc*, R. Fulton. *hc*, E. Horner; R. Fulton. *c*, H. Yardley; Mrs. Ladd; N. Hill.

TUMBLERS (Almond).—*Cock or Hen.*—1 and Cup, H. Yardley. 2 and *c*, R. Fulton. 3, E. Horner. *vhc*, R. Cant. *hc*, J. P. White, Birmingham; R. Fulton; A. & W Silvester.

TUMBLERS (Any variety of Short-faced).—*Cock or Hen.*—1, E. Horner. 2, G. Lisle, Loughborough. 3 and *vhc*, H. Yardley. *hc*, R. Fulton. *c*, R. Fulton; E. Horner.

OWLS (Foreign).—*Cock or Hen.*—1 and 2, T. W. Townson, Bowdon. 3, E. Horner. *vhc*, J. J. Sparrow, Grosvenor Mews, London. *hc*, N. Hill. *c*, R. Fulton; J. J. Sparrow.

OWLS (English).—*Cock or Hen.*—1 and Cup, G. E. Sawdon, Leeds. 2, T. W. Townson. 3, J. C. Smith. *hc*, T. W. Townson; W. Tomlins, Oxford; H. Yardley; J. C. Smith; T. G. Spruot, St. John's Wood, London. *c*, R Fulton; J. Walker, Barsiem; A. J. Barnes, Gloucester; F. P. Bulley, Oxford; N. Hill.

BARBS.—*Cock.*—1, H. M. Maynard. 2 and 3, R Fulton. *vhc*, E. Horner. *hc*, J. Baily, jun, Mount Street, London; E. Horner; N. Hill. *c*, L. Wright; H. Yardley; N. Hill. *Hen.*—1, H. M. Maynard. 2 and 3, R. Fulton. *vhc*, R. W. Bryce. *hc*, L. Wright; H. Yardley; E. Horner; N. Hill. *c*, N. Hill.

HARBS.—*Young Cock or Hen.*—1, R. Fulton. 2 and 3, R. W. Bryce. *hc*, H. Yardley (2); N. Hill. *c*, E. Horner.

TRUMPETERS.—*Cock or Hen.*—1 and Cup, J. Lederer. 2, *hc*, and *c*, R. Fulton. 3, E. Horner.

JACOBINS (Red or Yellow).—*Cock or Hen.*—1, N. Hill. 2, R. Fulton. 3, O. E. Cresswell. *vhc*, E. Horner. *hc*, R. Fulton; N. Hill (2). *c*, F. Siedle, Postmorlais.

JACOBINS (Any other colour)—*Cock or Hen.*—1, R. Fulton. 2, J. Hardy, Shepherd's Bush, London. 3, E Horner. *hc* and *c*, N. Hill.

FANTAILS.—*Cock or Hen.*—1, E. Horner. 2, N. Hill. *vhc*, H. M. Maynard. *hc*, Miss J. Milward, Newton St. Loe; N. Hill. *c*, H. M. Maynard; N. Hill; J. F. Loversidge, Newark.

TURBITS (Red or Yellow).—*Cock or Hen.*—1 and *vhc*, W. Croft, Leeds. 2, C. A. Crafer. 3, T. W. Townson. *hc*, R. Fulton; O. E. Cresswell; F. H. Muller, Bristol; W. Tedd. *c*, O. E. Cresswell; E. T. Dew; W. Tedd; N. Hill.

TURBITS (Any other colour).—*Cock or Hen.*—1 and Cup, O. E. Cresswell. 2, G. Hardy. 3, T. W. Townson. *vhc*, N. Hill. *hc*, R. Fulton; C. A. Crafer; W. Croft; S. Salter, Oxford. *c*, E. T. Dew; S. Salter; G. H. Gregory, Taunton; N. Hill.

NUNS.—*Cock or Hen.*—1 and 2, E. Horner. 3, W. Croft. *hc*, J. Baily, jun.; W. Croft. *c*, F. Siedle.

MAGPIES.—*Cock or Hen.*—1, C. G. Hitchcock, Oxford. 2, W. Tedd. 3, N. Hill. *vhc*, N. Hill. *hc*, A. J. Barnes; E. Horner; N. Hill. *c*, G. J. Dewey, Gloucester; E. Horner.

DRAGOONS (Blue or Silver).—*Cock or Hen.*—1, Rev. G. F. Hodson. 2, W. Hill. 3, W. Bishop, Dorchester. *vhc*, W. B. Tegetmeier, Finchley, London; W. Hill. *hc*, R. Woods, Macclesfield; Rev. G. F. Hodson; F. Graham; W. Hill, Manchester. *c*, F. Graham; J. Holland, Manchester; W. Bishop; H. Yardley; N. Hill.

DRAGOONS (Any other colour).—*Cock or Hen* —1, W. Hill. 3, N. Hill. *hc*, R. Fulton; F. Graham (2); W. Osmond, Dorchester; W. Bishop (2); F. W. F. Toomer, Swindon; N. Hill. *c*, R. Fulton

DRAGOONS (Any colour).—*Young Cock or Hen.*—1, R. Woods. 2 and 3, F. Graham. *vhc*, G. H. Gregory. *hc*, R. Fulton (2); J. Cock. *c*, J. Holland (2); G. H. Gregory

ANTWERPS (Short-faced).—*Cock or Hen* —1 and Cup, W. Gamon. 2, J. Kendrick, jun. 3, W. Slater, Gravelly Hill, Birmingham. *hc*, H. Gough, Wolverhampton; H. Yardley; W. Slater. *c*, H. Gough; H. Yardley.

ANTWERPS (Long-faced, any colour).—*Cock or Hen.*—1, W. Gamon, Chester. 2, J. W. Barker, Reading. 3, G. Bairstow, Bradford. *hc*, E. C. Stretch; C. F. Herrieff.

ANTWERPS.—*Young.*—*Cock or Hen.*—3, H. Gough. *hc*, J. Mitchell; J. Kendrick. *c*, A. Farndon, Leicester; A. J. Barnes; J. Holden, Bradford; J. Mitchell; H. Yardley.

ANY OTHER VARIETY —*Cock or Hen.*—1, R. Fulton (Turbiteen). 2, A. C. Merchant, Bristol (Archangel). *hc*, G. Hardy; H. Yardley; J. Baily, jun.; E. Horner; A. & W. Silvester; W. Tedd; N. Hill.

SELLING CLASS.—*Pair.*—1. H. Yardley. 2, D. Young. 3, J. F. Loversidge. *hc*, W. Bryant, Bristol; T. Herrieff; Mrs Ladd; D. Young, Leamington. *c*, J. Baily, jun.; W. D. Richardson, Somerset.

SELLING CLASS.—*Cock or Hen.*—1, N. Hill. 2, E. Horner. 3, R. Fulton. *hc*, T. Herrieff; H. Yardley; S. Salter (3). *c*, J. J. Sparrow.

Mr. Teebay judged the *Brahmas*, *Game*, and *Game Bantams*; Mr. Dixon the *Cochins*, *Hamburghs*, *French*, and *Variety* classes: and Mr. Burns the *Dorkings*, *Waterfowls*, *Variety Bantams*, and *Sale* classes; while Messrs. P. H. Jones and Charlton did the *Pigeons* between them.

DORCHESTER AND PORTSMOUTH SHOWS.—Specimens exhibited at Dorchester may be sent from there in time for the Portsmouth Show, and the Hon. Secs. of the former have promised to get all those entered for Portsmouth sent off so as to arrive there in time for judging on the 29th, provided proper labels are forwarded to them.

ABERDEEN POULTRY SHOW.

THE ninth annual Exhibition of the Northern Poultry Club was held in the Drill Hall, Aberdeen, on 8th and 9th inst. Entries were numerous, and the quality first-rate throughout.

At this Show *Dorkings* always head the prize list, and were divided into four classes—viz., old and young Coloured, and old and young Grey or White. In the old class Mr. Turnbull, Larbert, won well with a well-matched pen of good quality. Young birds of 1874 were a large and good lot, Mr. Clark of Fochabers, a veteran fancier of this breed, winning first and cup with birds which stood high at the Crystal Palace. The other prizetakers in this class were well deserving of their honours. Silver-Grey Dorkings were well represented, the cup in this class going to a large-sized and good pen belonging to Mr. W. Hendry; second were fair. First in young class were small, but good-coloured; second about the same in both respects; the other noticed pens were of average merit. *Spanish*, a small class, and this variety does not seem to hold ground here. The principal prizes were gained by Edinburgh birds (Mrs. Grassick), and easily outdistanced the rest. *Cochins* were good. First, a fine pen of Mrs. Hendrie, Inverness. The other noticed pens were of great merit. In young birds Mr. Proctor, Durham, easily won. *Brahmas* were numerous and good, the old beating the young. First and cup gained by Alex. Burnett, Montrose; 77 (J. Dempster) would have won if not out of condition from overshowing. *Houdans* were numerous and better in quality than usual; 97 was nearly suffocated from being packed in too small a hamper, and during the first day was in a dying condition, otherwise he was best in the class. *Hamburghs* were, as usual here, a good class. *Game* be te than usual, the cup going to a grand pen of Mr. Mason's. *Bantams* were good. First, fine Black Red; second, Piles.

Ducks were large and good, and the same may be said of *Geese* and *Turkeys*.

The show of PIGEONS was the great feature of the Exhibition, and amongst them the *Pouters* stood out prominent; in fact it was a Pouter show, there being 211 entries of them. We are sorry to say the decisions of the Judge in this department gave anything but satisfaction, and our own ideas on the subject will be seen from our notes. Pouter cocks, any age, began with Blues, and here we could by no means endorse the Judge's decision. The best bird was undoubtedly the third-prize, next came pen 244 (Ure); third should have been 241, same owner, a grand class. Black cocks were better judged—that is to say, the prize birds as a whole were the best in the class, but the second was far better than first in all respects. In Red cocks first was a very nice bird, though standing a trifle wide in the legs; second a better colour but short in leg. The best pen in the class was 260 (Lyell), though blind of an eye and solid-shouldered; third was a nice bird. Yellow cocks, the first in this class also won the cup for the best bird in the standard colour classes, but why we failed to see; he was short in leg and badly marked, and not to be compared with fully a dozen of the Blues, Blacks, and Reds. Pen 271 (Ure), was an easy first; second should have been third, and third second. White cocks were much better judged, and all good; 278 (Fulton), might have been third, but this was a small error, if any. Any other colour cocks were a fine class, amongst them some of the finest birds in the Show. Some grand Mealies would have gladdened the heart of Mr. Huie and of any true fancier. Pen 283, Mealy, should certainly have been first. Second a Splash, a fair bird. First a nice Mealy. 288 (Pratt), should not have been shown in this class, being merely a bad Black. Young Blue cocks were a magnificent class and contained some grand birds, but the judging very wide of the mark indeed; Pen 297 (Ure), was one of the best and most stylish Pouters ever shown, to praise it would be painting the lily. First a fair bird, but could not look at the bird named. Black cocks were a good class, but first was a great error in the face of No. 307 (Lyell), a grand bird and with a pair of splendid legs, well set on. 304 (the same owner), should have stood second, The winner was bad coloured and badly marked, being almost swallow-throated. Red cocks were a good class, but as a lot wanting in depth of colour. The nicest bird in the class was third, a most stylish Pouter, in fact we liked him almost better than any bird in the Show. First was bad coloured; 319, commended, was also a good bird, good style and nice clean limbs; 321 was the best coloured bird in the class. Yellow cocks, first the best in style though small. 323 (Ridley), should have been second, second third. White cocks, Mrs. Ladd's pen, 339, was the nicest bird in this class, but unfortunately its owner had forgotten to remove the home marks, and it along with all her other birds (which were in a similar condition), was disqualified. Blue hens, any age: 348, commended, was a fine showy hen, but best of all we liked No. 352 (Ure) unnoticed. 351, third, came next, these were the pick of the lot. Black hens were perhaps

as a class the best in marking in the Show. First a grand and showy hen. This was a well-judged class. Red hens a good lot, first a nice bird short of colour, 368 very long in limb; 370 (White), a handsome showy hen. The first-prize hen in Yellows won besides the cup as the best bird in the old hen classes except White and Any other colour. Why she did so we cannot see, as not only was she far from the best in the lot, she was not even nearly best in her own class; the third-prize should have stood first. White hens a fine class, and the winners all there. Any other colour, a poor Chequer first; second blue-tailed White; third, a handsome Sandy. 391 (Hill), a very stylish hen; 392, Mitchell, a Mealy, and one of the best birds in the Show. Young hens, Blue, first-and-cup not nearly equal to the same owner's second-prize bird, which should have stood first. Blacks were a small class, and first a great mistake, she was without exception the worst in the class, and had not one point to recommend her; second was next her in badness, and stood with her head down and tail up, like an English Fantail. 415 (Pratt), was worth a dozen of both. Red hens poor in colour, many of them otherwise good; we thought second beat first here. White hens a grand lot, well judged. Here we end the Pouters. There were we think, many errors in judging; at least that was our opinion, and that of all the fanciers we spoke to. The whole matter looked as if much too free a use of the measuring stick had been made, and too little of the show pen; but this is of conrse merely conjectnre. The birds themselves were ou the whole an improvement on last year. We saw fewer heavy and rough-legged birds shown, bnt colonr in Reds and Yellows is no better. Blacks, however, are better in colour and cleaner in limb, even allowing for the amount of cleaning done. Blues were certainly at the top of the tree, and some of them, indeed most, were truly grand Pouters. *Carriers* were few in number, though of fair quality. First, a nice Dun hen, which might, however, have given place to second, a stylish Black cock. Young Carriers.—First, a Dun hen, might have put up with second; the second a nice Black; third, good Black, but of poor colour. Almonds few in number, first a good-colour head-and-beak bird; second, better head but too dark. Any other colour.—First, a fair Agate; second, Kite; third, Black Mottle, should have been beaten by a nice little Beard. *Barbs.*—First, a Red of good quality, but getting into the sere and yellow, very yellow leaf; second, a Black, a perfect object, so used-up; third, a good young Dun, and highly commended a good Yellow, should have been second and third. *Fantails* were judged in a manner most trying to the feelings of a Scotch fancier. First and second were English birds, large and coarse, not the least motion; on all hands it was allowed that 476 (Spence), 479 (Ure), 488 (Thomson), 490A (Smith), were the best in the class. *Jacobins* were a fair class and well jndged, while *Trumpeters*, though few, were every one first-rate. *Owls* and *Turbits* were very good, and the judging satisfactory. *Dragoons* we know nothing about. Common *Tumblers* were a fine class, some very pretty Mottles taking the prizes. The Variety class.—First, a sort of cross between a Spot and a Swallow; second a nice Frillback; third, a pretty Ice.

Dorkings (Coloured).—1, J. Turnhull, Larhert. 2, A. Allan, Udny. 3, Miss D. Fordyce, Maud. *Chickens.*—1, Cup, and *hc*, J. Clark, Fochabers. 2, W. Snowie, Monymusk. 3, A. Allan.

Dorkings (Silver-Grey or White).—1 and Cup, W. Hendry, Aberdeen. 2, D. Gracie, Stonehaven. 3, D. Ferrier, Woodside. *Chickens.*—1, J. Duncan, Blackburn. 2, J. Mitchell, Glasgow. 3, D. Gracie. *hc*, J. Watson, Aberdeen.

Spanish.—1, R. Philip, Aberdeen. 2, Mrs. Grassick, Edinburgh. 3, J. Duncan. *Chickens* —1 and Cup, Mrs. Grassick. 2 and 3, Mrs. W. Steven, Montrose. *c*, W. Webster.

Cochin-Chinas.—1, Mrs. J. Hendrie, Inverness. 2, Mrs. G. Armitstead, Inchture. 3, G. H. Proctor, Durham. *hc*, W. & R. Davidson, Montrose; Mrs. G. Armitstead. *c*, R. Blyth. *Chickens.*—1, G. H. Proctor. 2, Mrs. W. Steven. 3, Mrs. M'Kenzie. *hc*, F. C. Parker, Dundee. *c*, R. Blyth.

Brahmas.—1 and Cup, A. Burnett, Montrose. 2, J. Smart, Carnoustie, 3, J. Sandeman, Dundee. *hc*, G. Summers, Whitehouse. *c*, A. Forbes. *Chickens.*—1, R. Maxwell, Dumfries. 2 and *hc*, Rev. G. Wilson, Fetternear. 3, J. Thomson, Aberdeen.

Houdans.—1, R. Mowat, Aberdeen. 2 and *hc*, U. H. Allen, Banff. 3, W. C. King, Aberdeen. *c*, J. Smart.

Hamburghs (Gold or Silver-pencilled).—1, Cup, and 2, W. Hadden, Fraserburgh. 3, J. Brands, Denny. *hc*, P. Campbell; J. Taylor, Montrose. *c*, P. Campbell.

Hamburghs (Gold or Silver-spangled).—1, J. M. Campbell, Turriff. 2, G. Campbell, Pitalligo. 3, W. Ferguson, Inverness. *hc*, E. Robinson, Airdrie.

Game —*Cock* —1, J. Mackay, Arbroath. 2, T. N. Mitchell, Perth. 3, J. Allan. *hc*, J. Nelson, Hexham. *Hen* —1, A. Dawson, Torres Station. 2, T. W. Mitchell, Perth. 3, D. Harley, Edinburgh. *Chickens.*—1 and Cup, T. Mason. 2, J. Waddell, Airdrie. 3, J. Nelson. *hc*, Master A. Frew, Kirkcaldy.

Any other Variety.—1, J. Taylor (Golden Polands). 2, G. Caithness, Carnoustie (Black Hamburgh). 3, C. B. Taylor, Montrose (Silver Polands). *hc*, Miss B. P. Frew, Kirkcaldy. *c*, J. Mackay, Grantown.

Selling Class.—1, J. Clark. 2, Mrs. C. B. Taylor. 3, W. Snowie. *hc*, A. Mitchell, Aberdeen.

Ducks.—1, A. Bowie. Carnoustie. 2, Miss I. Gerrard. 3, A. Skinner, Tullynessle. *hc*, Miss I. Gerrard, Turriff; A. Burnett, Montrose. *c*, J. Mitchell; J. S. Henderson, Aberdeen.

Turkeys.—1, Miss D. Fordyce, Maud. 2, A. Bowie.

Geese.—1 and 2, A. Christie, Kintore. *c*, J. Stephen, Kintore.

Game Bantams.—1 and Cup, J. Grieve, Grandholm. 2 and *hc*, R. Brownlie, Kirkcaldy. 3, J. Nelson. *c*, A. Mitchell.

Bantams (Any other variety).—1, T. & W. Kerr, Beith. 2, J. A. Dempster, Stirling. 3, Miss R. Frew. *hc*, J. Taylor; T. & W. Kerr. *c*, Miss R. C. Frew, Kirkcaldy.

PIGEONS.

Pouters (Blue-pied).—*Cock.*—1, R. Fulton, New Cross, London. 2, J. M'Culloch, Uddington. 3, H. Pratt, Hampton-in-Arden. *hc*, G. Ure, Broughty Ferry. *c*, J. White, Aberdeen. *Hens* —1, W. Ridley, Hexham. 2, J. White. 3, G. Ure. *c*, R. W. Bryce, Edinburgh; J. M'Culloch; G. Ure (2).

Pouters (Black-pied).—*Cocks.*—1, H. Pratt. 2, G. Ure. 3, W. Ridley. *hc*, G. Ure (2). *c*, A. Frame, Larkhall. *Hens.*—1 and 3, G. Ure. 2, W. Ridley. *c*, W. Ridley; G. Ure.

Pouters (Red-pied).—*Cocks.*—1, J. M'Culloch. 2, R. Fulton. 3, J. White. *hc*, W. Ridley; R. Fulton; G. Ure. *Hens.*—1, J. M'Culloch. 2, R. Fulton. 3, W Ridley. *hc*, G Ure. *c*, W. Ridley.

Pouters (Yellow-pied).—*Cocks.*—1 and Cup, R. Fulton. 2, J. Mitchell. 3 and *hc*, G. Ure. *Hens* —1 and Cup, R. Fulton. 2, H. Pratt. 3, G. Ure. *hc*, G. Ure; H. Pratt. *c*, G. Ure.

Pouters (White).—*Cocks.*—1, R. W. Bryce, Edinburgh. 2, R. Fulton. 3, J. White. *Hens.*—1 and Cup, R. W. Bryce. 2, W. Ridley. 3, R. Fulton. *c*, W. C. Thompson, Broughty Ferry; J. White; R. Fulton; A. Anderson.

Pouters (Any colour or marking).—*Cocks.*—1, R. Fulton. 2, J. White. 3, A. Anderson, Edinburgh. *Hens.*—1, R. Fulton. 2, W. Hendry. 3, G. Ure.

Pouters (Blue-pied).—*Young.*—*Cocks.*—1, R. Fulton. 2, J. White. 3, J. M'Culloch. *hc*, W. Ridley; G. Ure. *Hens.*—1, Cup, and 2, G. Ure. 3, J M'Culloch. *hc*, W. Ridley; W. Nottage, Northampton; J. White; J. Mitchell. *c*, A. Frame; W. Hendry.

Pouters (Black-pied).—*Young.*—*Cocks.*—1 and Cup, R. Fulton. 2, W. Ridley. 3, J. White. *hc*, J. C. Lyell, Monifieth. *Hens.*—Medal and 1, A. Frame. 2, H. Thomson. 3, G. Ure.

Pouter (Red-pied).—*Young.*—*Cocks.*—1, R. Fulton. 2, J. C. Lyall. 3, G. Ure. *c*, G. Ure; H. Pratt; F. M'Rae, Aberdeen. *Hens.*—1, A. Robb, Alloa. 2, J. M'Culloch. 3, F. M'Rae. *hc*, W. Nottage. *c*, J. C. Lyell; G. Ure.

Pouters (Yellow-pied).—*Young.*—*Cocks.*—1, J. M'Culloch. 2, J. Mitchell. 3, H. Pratt. *Hens.*—1, N. Hill, Ealing. 2, J. M'Culloch. 3, A. Robb. *c*, G. Ure.

Pouters (White).—*Young.*—*Cocks.*—1, J. M'Culloch. 2, H. Pratt. 3, D. Thomson, Claremount, Alloa. *Hens.*—1, H. Pratt. 2, R. Fulton. 3, J. M'Culloch.

Carriers.—*Cock or Hen.*—1 Cup and 3, R. Fulton. 2 and *hc*, W. Ridley. *c*, J. C. Lyell. *Young.*—*Cock or Hen.*—1 and 2, R. Fulton. 3, G. E. Spence, Seafield, Broughty Ferry.

Tumblers (Short-faced Almonds).—*Cock or Hen.*—1, R. W. Bryce. 2 and 3, R. Fulton.

Tumblers (Short-faced, any other colour).—*Cock or Hen.*—1 and 2, R. W. Bryce. 3, J. Smart, Montrose. *c*, R. Fulton; J. Smart.

Barbs.—*Cock or Hen.*—1, R. W. Bryce. 2, R. Fulton. 3 and *hc*, J. E. Spence. *c*, R. W. Bryce.

Fantails.—*Cock or Hen.*—1, H. Yardley, Birmingham. 2, J. F. Loversidge, Newark. 3, J. E. Spence.

Jacobins.—*Cock or Hen.*—1, R. W. Bryce. 2, R. Fulton. 3, J. G. Orr, Beith.

Trumpeters.—*Cock or Hen* —1 and 2, R Fulton. 3, J. Lederer, Bootle.

Owls.—*Cock or Hen.*—1, R. Fulton. 2, R. W. Bryce. 3, W. & R. Davidson. *c*, Rev. W. J. Steven, Montrose.

Turbits.—*Cock or Hen.*—1, J. G. Orr. 2, W. Ridley. 3, R. Fulton. *c*, J. R. Reanards, Helensburgh.

Nuns.—*Cock or Hen.*—1, A. Dathie. 2 and 3, W. Hendry.

Dragoons.—*Cock or Hen.*—1, R. Fulton. 2, J. Cowley. 3, H. Yardley.

Tumblers (Common Flying).—*Cock or Hen.*—1, J. G. Orr. 2, W. Ridley. 3, W. B. Mapplebeck, jun., Birmingham. *c*, J. G Orr; H. Yardley.

Any other Variety.—*Cock or Hen.*—1, R. Fulton. 2, A. Cowie, Ellon. 3, J. Cowe, Aberdeen.

Selling Class.—1, J. Smart. 2, A. N. Bryce. 3, H. Yardley.

Judges. — *Poultry:* Mr. Paterson, Airdrie; *Pigeons:* Mr. Corker, London.

DRAGOONS.

Allow me, as a Dragoon and Owl fancier, to express my approval of "Wiltshire Rector's" and Mr. Staunton's articles. I am often disgusted to see the heavy first cross from a Carrier winning over pure Dragoons. Until lately we had the same thing occurring in Owls. Anglo-African mongrels always won over pnre English, now we have a distinct class. I trust we shall soon have Horsemen and Dragoon classes, not a number of birds of all styles and sizes competing together.—W. G. Henry.

HARDINESS OF CANARIES.

Seeing an article in your number on Canaries, in which it is said that their being kept in a detached brick building in winter is a pretty fair test as to the amount of cold they will hear, I thought it might be worth while to say that I have had Canaries entirely out of doors for nearly two years. In winter the whole front of the cage, which is 4½ feet long and 3 feet high, has no covering over the wire. During the late severe weather I covered part of the front with a wrapper, leaving about 3 feet quite open. They have a few branches of Austrian pine to shelter in, and are fed with canary and cale seed and groundsel, and when very cold a little hemp seed as well. The thermometer has registered 15° of frost two or three nights, yet my pets have been quite ready for their food and cold bath in the morning, which, if freezing or not, they generally enjoyed, and my songsters hardly ever failed to reward me during the frost. My birds are not troubled with asthma, and are not indulged with sugar, sponge cake, or any other things contrary to their nature. —A. D. A., *Roxwell, Essex.*

BEE-KEEPING, 1874.

Another year has gone, and still we do not all agree which is the best hive into which to place our little pets. Some will have it that one of straw is the best; others prefer wood, and a third party are for wood and straw combined, and a fifth say the Woodbury straw bar-frame is best. Well, who must decide? It is a question not to be decided about too hastily. We all have our fancies; and I must confess that, to have a large harvest of honey and to make money by our bees, I go in for large hives, not less in size than Pettigrew's 18-inch.

I have been a bee-keeper now in the teens of years, and went in at first for straw, my tutor not knowing of any kind but straw. Being anxious for swarms his advice was, "Small hives for swarms, and large ones for honey;" but the large hives of his day were more like supers of this time.

I went on for some time in the old style until I saw a copy of The Journal of Horticulture, and then I found that bee-keeping was carried out scientifically.

I obtained an introduction to our late and lamented friend Mr. Woodbury, and of course I must have some of his hives. I then got hold of Nutt's work on bees. Certainly my apiary would not be complete without one of his hives, so I bought one with its "pavilion of Nature." This led me to read Huber, for whom I have the greatest esteem as a writer, and I must say that of all the hives of wood I like the Huber the best; but my Huber hive is somewhat modified, it is not the Huber proper. The little alteration I have made I think an improvement. In the Woodbury there is sometimes a difficulty in drawing up the frames, which there is not in the Huber; and, again, when you take out a frame of the Woodbury you leave a vacant space, but in the Huber you can contract or expand the hive at your pleasure to what size you like.

I have the Woodbury glass observatory hive with nine bars, and I must confess I would much rather have glass than wood; there is no moisture in it if you will take off the top and put on the quilt to prevent the steam from condensing.

I have also the globular-shaped hive, with which I took the first prize at Manchester last year. I promised that I would let the readers of The Journal of Horticulture know how it had done this season. I think I told your readers that I put a swarm into it last season, but it being late it did not do well, and was not filled with comb when I took it to the Manchester Show. It passed through the winter well, and I had a swarm from it about the second week in June and a cast in eleven days after, and it is now in first-rate order, very full of bees and likely to do well next year. So you see it is rather better than a toy and only fit for exhibition purposes.

I have now twelve stocks all right for the winter, but only one of Pettigrew's 18-inch, which is very heavy and is the best stock I have in my garden, and I shall not have any straws less than 18 inches.

I still keep, and shall continue to keep, the Woodbury, Huber, and Nutt's hives, but only for ornament, as I do my unicomb.

I have had a good season both in honey and swarms, most of the stocks having swarmed twice. I very seldom take honey out of the hives, only use supers and leave the rest for the bees.

Now that the show of bees, &c., at the Crystal Palace is a thing of the past, I hope the success the managers have had will induce them to go on. But I should advise them to remove the show from place to place; say in 1875 let it be in Manchester or Birmingham, or any place they think would take it up. The Manchester people intend holding another next year upon a much larger scale, but to make it attractive the bees should be at work. I am glad to see that agricultural societies are now beginning to take up the encouragement of bee-keeping. The Manchester and Liverpool Agricultural Society, at their Show held at Staleybridge last year, gave prizes for bees and honey. The bees were at work three days in the show yard.—South Lancashire Bee-keeper.

BEE-KEEPING IN RUSSIA.

[Translated from the German, "Russia in the Nineteenth Century." By Von Th. von Lengenfeldt.]

Bee-keeping is every where practised in Russia, more especially in Little Russia and New Russia. In the province of Pultawa (population 2,000,000), there are 500,000, and in that of Yekarterinoslaw (population 105,000), 400,000 hives. In Western Russia it chiefly flourishes in the province of Kowne where the Tchmude tribe are principally engaged in bee-keeping; and in Eastern Russia the Finnic tribes are enthusiastic bee-keepers. In Siberia, the pursuit is mostly carried on about the Altai Mountains, and in Caucasia by the tribes of the Meretinzes and Grusinians. In South Russia artificial bee hives are used, whilst in North Russia the bees are kept in a natural manner in the forests.

In former times Poland was celebrated for its bee culture, and is still now to some extent in the province of Lublin, having everywhere else fallen into decay. The reason why bee-keeping is so industriously carried on in Russia is twofold. First, because the peasants use honey instead of sugar; and secondly, because wax tapers to the value of 1,200,000 rubles (nearly £1,825,000) are required for the churches. Buschen states the quantity of honey annually produced in European Russia to be 600,000 to 700,000 lbs. (9,643 to 11,250 tons), and a proportionate quantity of wax.—John Hunter, 5, *Eaton Rise, Ealing.*

TO OUR READERS.

The great length of the Bristol Show report and large amount of other communications compel us, although we have doubled our Supplement, to omit until next week reports of Fakenham, Paisley, Baildon, Nenthead, and other Exhibitions, which are already in type.

OUR LETTER BOX.

Broughty Ferry Poultry Show.—Mrs. W. Chalmers, Hallyburton, Conpar Angus, informs us that she was awarded the cup for the best Dorking cock.

Dorking Cock Dying Suddenly (*J. E. M.*).—Blood-vessel ruptured on the brain.

Fowls with Ducks (*Portcullis*).—One reason why Ducks and fowls do better apart is that the former delight in slush, and fowls like a dry place. Fowls like a hard surface, and Ducks like a soft muddy one. A Duck may be as filthy as possible in appearance, but a few minutes in the water enable it to come perfect in plumage and perfectly clean. If a fowl gets its legs cased in mud (especially if feather-legged), and the tips of wings and tail draggled, it is a long process for it to get dry. Fifty fowls will drink from a vessel without spilling a drop. Two Ducks will scatter the water all over the place. We quite approve of giving the fowls part of the cow house. It is the only artificial heat we would use. Your pullets will continue to lay. The hens will lay in six weeks. The Ducks will not lay yet. Give them their liberty. They only fatten when they are shut-up, and that is often followed by loss of plumage.

Price of Carriers and Almond Tumblers (*A Novice*).—We do not think it right to recommend by name those who have birds for sale, but the best thing you can do is to write to some of those gentlemen who are famous for taking prizes in these varieties, and whose advertisements appear in our columns.

What Bantams to Keep (*A Subscriber*).—"Wiltshire Rector" is much gratified that his remarks in his New Year's article have pleased you. He recommends you to get a sitting of Black Bantam eggs from some exhibitor. As you already keep fowls you are sure to have a broody hen in the spring or early summer. Black Bantams are hardy and healthy, and lay well and sit well. Then there is no comb-cutting—dubbing as it is called—of the cocks, as when Game Bantams are kept, and this dubbing always shocks little girls. If you breed the Bantams early in the spring they will naturally be larger. But they are, in order to keep them small, bred in early summer. The place you have and subsoil would do well for Blacks, or you might have a little wooden house and wired-in run for them, near the house, as they would be pets for a child, and are best near at hand and most enjoyed.

Belgian Hare and Himalayan Rabbits (*T. M. N.*).—Put them together about four o'clock in the afternoon, and leave them together till the middle of the next day. The age is quite sufficient. We have no doubt this will be found satisfactory.

British Bee Association (*K. W.*).—Write to the Secretary, Mr. J. Hunter, Eaton Rise, Ealing, London, W.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.
Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. Jan.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 6	30.029	45.0	44.1	S.	39.0	49.0	41.9	71.5	98.0	—
Th. 7	30.081	41.5	40.2	S.E.	39.5	42.6	39.7	43.0	39.2	0.011
Fri. 8	30.158	40.0	39.2	S.	39.4	42.8	38.0	43.9	37.2	—
Sat. 9	30.003	41.2	40.4	S.E.	39.5	45.4	39.8	50.4	38.1	—
Sun. 10	29.789	40.1	40.0	S.E.	39.0	47.4	37.5	48.4	35.1	—
Mo. 11	29.841	47.2	46.2	S.W.	39.1	49.8	39.1	59.1	35.2	0.060
Tu. 12	29.921	46.2	46.0	S.W.	39.4	49.2	41.1	50.0	37.8	0.102
Means	21.975	43.0	42.3		39.3	46.6	39.5	52.3	37.2	0.173

REMARKS.

6th.—A warm, bright, pleasant day throughout.

7th.—Dark in the morning, rather better in the middle of the day; dark afternoon, and wet night.

8th.—Rather foggy morning; dark and dull all day, though not very foggy.

9th.—Fair morning, and until noon, but then dull, though the night was fair.

10th.—Fair early, but very dark here all day, and especially so about noon.

11th.—Rather dark all day, except between 12 and 2 P.M., when there was a little sun.

12th.—A damp, dark, uncomfortable day, frequent slight showers, but not much rain falling.

A rise of 8° in the mean 9 A.M. temperature, and of 10° in the mean minimum since last week. The weather, however, has been extremely damp and uncomfortable.—G. J. Symons.

COVENT GARDEN MARKET.—January 13.

A fair supply but very little business doing among home productions. Imports are large, including heavy supplies of Broccoli from the Channel Islands and France. There is also a large arrival of fresh St. Michael Pines, and Shaddocks and Pommeloes from the West Indies. Potato trade dull, except for superior qualities, which bear a small proportion to the bulk this season.

FRUIT.

		s.	d.		s.	d.			s.	d.		s.	d.
Apples	½ sieve	1	0	to	1	6	Mulberries	₱ lb.	0	0	to	0	0
Apricots	doz.	0	0		0	0	Nectarines	doz.	0	0		0	0
Cherries	₱ lb.	0	0		0	0	Oranges	₱ 100	4	0		10	0
Chestnuts	bushel	10	0		20	0	Peaches	doz.	0	0		0	0
Currants	½ sieve	0	0		0	0	Pears, kitchen	doz.	2	0		3	0
Black	do.	0	0		0	0	dessert	doz.	2	0		4	0
Figs	doz.	0	0		0	0	Pine Apples	lb.	2	0		5	0
Filberts	lb.	1	0		1	6	Plums	½ sieve	0	0		0	0
Cobs	lb.	1	0		1	6	Quinces	doz.	0	0		0	0
Gooseberries	quart	0	0		0	0	Raspberries	lb.	0	0		0	0
Grapes, hothouse	lb.	4	0		8	0	Strawberries	₱ lb.	0	0		0	0
Lemons	₱ 100	8	0		12	0	Walnuts	bushel	10	0		2	0
Melons	each	1	0		3	0	ditto	₱ 100	1	0		16	0

WEEKLY CALENDAR.

Day of Month	Day of Week.	JANUARY 21—27, 1875.	Average Temperature near London.			Sun Rises	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
21	Th	Linnæan at 8.	42.9	32.0	37.5	56 af 7	27 af 4	53 af 3	22 af 8	●	11 38	21
22	F		43.1	32.3	37.7	54 7	29 4	17 5	51 8	15	11 54	22
23	S	Agardh born, 1785.	42.6	32.4	37.5	53 7	31 4	40 6	12 9	16	12 10	23
24	Sun	Septuagesima.	43.1	32.1	37.6	52 7	33 4	58 7	27 9	17	12 24	24
25	M		43.4	32.3	37.9	51 7	34 4	12 9	39 9	18	12 38	25
26	Tu		45.5	32.3	38.9	49 7	36 4	24 10	50 9	19	12 51	26
27	W	Stephen Switzer born, 1682.	44.6	31.2	37.9	48 7	38 4	35 11	0 10	20	13 3	27

From observations taken near London during forty-three years, the average day temperature of the week is 43.6°; and its night temperature 32.6°.

WINTER CUCUMBERS.

I FEEL I owe an apology to some of your readers for not answering their queries on the above subject sooner, but I thought probably if left alone they would answer each other. As there seems to be now no hope of this, I will take the queries seriatim, and see if I have anything to add to what appeared in the Journal of November 26th. At the same time be it understood that when I speak of my successes it is in no boastful spirit. I do not for a moment suppose I should succeed so well under the conditions named by some of your correspondents.

"S. J. A." (page 489) is the first querist, and to him, before saying anything about Cucumbers, I will give a word of advice on another matter; probably, however, his good sense will prevent him requiring it. He is acting under another's direction, and the one whose direction he acts under has to bear the responsibility, and therefore is entitled to carry out his own plans, and it is the duty of "S. J. A." to enter into the spirit of them as thoroughly as possible, and carry them out to the letter. It will not do for "S. J. A." to be pulling one way, and the one who gives him directions pulling another. "S. J. A." must make up his mind that Cucumbers can be grown with a night temperature of 70°, and determine to do it. I should if similarly situated. "S. J. A." will probably have the chance some day of using his own discretion as to cultural details, and he will then find that there is a great deal more requiring to be erased from the ordinary garden calendar besides that bearing on high night temperatures. I know of no reason for sowing four or more seeds in a pot, and afterwards breaking their roots in repotting them, necessitating shading until they are re-established, and resulting in loss of vigour and loss of time. Sow in single pots, break not a root, and never shade, unless for an hour or two after a spell of dull weather. I consider it preferable to use liquid manure when required rather than mix dung with the soil. There is very little in the remains of a spent hotbed for plants to feed on, the process of fermenting has taken most of the ammonia away, and what is called manure is often only the packing material which once contained it.

"R. R. S. H." (page 501), is the next querist; but I do not quite understand whether he wants information or an argument. I will suppose it is the former. Arguments generally end in personalities, and impart but little information. Well, then, the Cucumber I grow is called Baron Hill, or Dickson's Favourite, and Dickson's All the Year Round of F. & A. Dickson. I do not say it is the best, bnt it is a good one, and has served me well; therefore, till I prove another to be better, I shall stick to it. Telegraph is also a splendid winter Cucumber. "R. R. S. H." says he cannot get good Cucumbers with a lower minimum than 60°. During the three-weeks frost we lately had my house was more than once below 50°, and the plants are now in beautifnl health, and showing three fruits at almost every joint. Scores of leaves measure 15 inches across, and have stalks 9 inches long. Two plants fill a space of 30 feet by 10 feet. There is not an insect or a speck of mildew on them, and they are clothed with foliage to within a foot of the base.

I have great faith in a good steady bottom heat; I have just tested it under my plants, and find it to be 78° at 10 inches below the surface. The atmospheric temperature at the same time is 62°; and as the weather is mild, and there is not much fire going now, I should say at a guess that the bottom heat is never below 70°. When it is considered what a very high temperature the roots of Cucumbers must sometimes be in when grown on ordinary hotbeds in summer, and how rapidly they grow, and what enormous leaves the plants produce, it is no wonder that they also like to be kept warm in winter; but beyond keeping the plants comfortable, nothing further should be aimed at, excepting by daylight. All growth made in the dark is worse than useless; the brighter the light the higher may be the temperature.

The note by 'W. G. S.," January 7th, is a valuable addition to onr Cucumber knowledge, and I have no doubt Mr. Platt will profit by it. I should recommend him to clear out his Cucumber house—soil, slabs, water, and everything, and scald every part that can be scalded, oiling or painting the woodwork, limewashing the walls, &c., and the slabs if used again should first be passed through a fire or boiling water, and then to adopt my plan of using simply very light turfy soil. This may also be placed over a wood fire and made rather hot before using, but not burned sufficiently to destroy the fibre. I should prefer rubble to water in winter about the bottom-heat pipes, as I think the soil would thereby be kept sweeter. 60° is not generally considered a high minimnm, although I recommend 55° as being sufficiently high. When the article was written which appeared November 26th, I had on my mind those who recommend a night temperature of 65°, and even 70°; the higher figure being recommended that same week in a very influential contemporary. If mine had been at 70° on the last day of the old year, when we had 25° frost, I do not suppose they would now be in as good a condition as they are. The house was nearly down to 50°, and was covered with frigi domo for forty-eight hours. It was merely one long night to the plants, and they suffered far less than they would have done from a strong fire heat.—Wm. Taylor.

BIRDS AND FRUIT BUDS.

In a contemporary a correspondent runs a tilt long and strong against small birds, and especially the house sparrow. He says, after describing the havoc small birds commit in the destruction of fruit buds, "Sparrows are most destructive this way. Such birds are becoming far too numerous." The former he presently qualifies by stating, "In the matter of fruit buds they [sparrows] are almost as destructive as the bullfinch." The sense is so much altered as to reduce sparrows to an inferior rank as bud-destroyers to bullfinches; whereas he sets

out with "Sparrows are most destructive." Then proceeding, he says, "I have watched them closely, and have never yet seen them take insect food; and it would appear almost as natural to see any of the carnivorous animals eating hay as it would to see hard-billed birds, such as sparrows and finches, eating insects." Well may he have "grave doubts," though he has "watched them closely," of sparrows eating insects. But the subject is treated so vaguely; as, for instance, "a few charges of powder and shot soon rid the garden of their [bull-finches'] presence, but to try and reduce sparrows in this way appears to bring hundreds to the funeral."

The whole tenor of his remarks exhibits only prejudice and wanton misrepresentation of the sparrow. I have "grave doubts" that his eyes are so blinded by prejudice as "having eyes he sees not" the good sparrows do in a garden; in fact, he shows ignorance of the habits of this useful bird. Anyhow, the sparrow I know and have known since I can remember anything, and in gardens too, is a very different creature to what it is represented. I put this question to a youth of fifteen summers—"What do sparrows feed their young with?" And his answer was, "Caterpillars."

If there are any that have "grave doubts" of sparrows devouring multitudes of insects, they may in the coming season watch them going to their young with insect food several times an hour, and it is not difficult to ascertain of what this food is derived. It is not to the point to conclude because they are "hard-billed" they do not eat insects, or that carnivorous animals will not eat hay, for the merest tyro in natural history knows cats are, or may, often be seen eating grass. The blue titmouse, though a ravenous eater of flesh, is equally fond of Green Peas; and the sparrow, though a seed-eater—a vegetarian if you will, has his food fitted to its requirements. What seeds has the sparrow in early summer wherewith to satisfy the craving of itself and young? Seeds! Is it likely to find these on Rose bushes, Gooseberry, Apple, and Plum trees? Why does it frequent our gardens, be most busy there during the breeding season? Surely its place is in the farmyard, the barn, at the place where seeds or its vegetarian diet is to be had. But instinct tells this companion of man in every clime, whose footsteps it follows, that it is in the garden, on Rose, Gooseberry, Currant, Apple, Plum, and other subjects there cultivated, aphis and caterpillars are to be had, as well as green food, as the top of Peas. From the first dawn of spring to the time its young is strong of wing the sparrow is one of the busiest of gardeners. Early morning sees the creature at work—labours carried on unceasingly until the sun is low in the west, freeing the trees of which man, his murderer, expects fruit in due time, and as far as the sparrow is concerned he may have unmolested. Not so much can be said of some of the soft-billed birds; and for at least four months of close attention to the garden, ever vigilant, ever searching for, devouring, or taking to its young insect food, this bird is—(because the insect food fails or instinct says is not required, falls upon Green Peas or the tender grain of the fields)—to have levelled against it, not shot, for this brings hundreds to the funeral, but denunciation of its merits, gross misrepresentation of its habits, and upon this find a plea for their destruction as "an unmixed evil." After this what next? Strew poisoned Wheat for them to eat! There is no telling what mischief may be done by the dictation of those denouncing in no measured terms a most useful and confiding creature; and it is with a hope that any of the readers of this Journal having waged hitherto, or determined to wage in future, a war of extermination against these birds, to convince themselves before they do so by ocular proof of the truth of those evils it is said to effect.

Either the house-sparrow that I recognise as such is a different creature to that of others, or the instinctive creature knows his friends and enemies. It were well if it did, leaving its abusers and destroyers to reap the fruit of their labours in swarms of lice and caterpillars covering the land.

The sparrow (Passer domesticus) I know is a bold confiding bird. Wherever man fixes his habitation there we find this bird, courageous and even impudent in its familiarity with his dwelling and its surroundings. The whole of its life is devoted to the service of man. In the forest, the wilderness, it has no place. Its house is made beside—often beneath—the same roof as that it seeks to benefit by taking what would often be wasted, helping itself to anything it can find in the shape of seed or grain or made thereof.

This bird builds its nest beneath roofs of houses or buildings, and in trees, especially evergreens, if there are any near human habitations, and rears two or more broods of young in a season. Its young are reared upon insect food, in the nest mainly if not exclusively, and when taking to wing is led to seek for itself its food upon subjects that have the "seed within itself," or subjects which at no time yield in their fruit the creature its food. As the bird becomes older it takes to Peas, then to grain, in both cases soft, and ultimately to hard seeds or grain, varying its diet with soft or cooked food.

In a garden the sparrow does some harm. What does not? It will take the tender tops of Peas, but a dusting of lime will prevent its doing so; but it will still visit them, and woe betide any weevil or grub that may show itself. It will keep company with the Peas all along, never so happy as when they are in flower. And what does it want then? Why, that the old take to their young, and the young consume on the spot. It eats the young Peas, but is easily scared by an old hat suspended between two stakes, or a net will make all safe. Crocus flowers are pulled in pieces; a black thread suspended over them will mostly keep the birds at a respectful distance. Fruit buds I have never known the sparrows touch. They are not prevented in any way from doing so, and yet they have never eaten any. For full thirty years this is my experience—daily experience, of sparrows in gardens. I know the sparrows are blamed by almost everyone for taking fruit buds, especially of the Gooseberry, but the linnet is never dreamt of, but a more rapacious bud-destroyer, nor more sly and shy bird at it, does not exist. Early morn is the time to see the linnets at work, and away they are with a twitter. Sparrows, because seen on the bushes in broad daylight, are the rogues. I of course do not know what the sparrow may do in other gardens than those of which I have happened to have charge, and these have been gardens in agricultural villages—farm-steadings abundant—away from even those, and in towns where there is no feathered note so familiar in a natural state as that of the sparrow, and in no instance has this bird taken a single fruit bud. To see buds taken, and because the sparrow is seen where or near whence they were removed, is not enough. Proof positive and conclusive is needed, and until this is forthcoming let me ask your readers to stay execution until proof is forthcoming in personal observation and practical experience.—G. Abbey.

NOTES FROM MY GARDEN IN 1874.

The favour with which the few notes I gave on my garden in 1873 were received, and the conviction that experience such as we are all capable of telling does much in aiding others, induce me again to put on record a few simple notes which may be helpful to those situated like myself. Mr. Luckhurst writes from a different standpoint. He has to do with a large place; I, on the contrary, have only a small one, which I have already described, and in which it is my endeavour to do as much in various departments of gardening as I possibly can, laying claim to no superior method of culture—blending, it may be, a good deal—having to tell of many losses and failures, but on the whole getting as much enjoyment out of my little plot as I have any reasonable right to expect.

A few alterations have been made during the past year, and I may perhaps regard them as the last I shall make. I have been enabled to build a wall some 230 feet with a good south and south-western aspect; and this has necessitated the cutting-down of a number of useless Filbert trees, which the soil did not suit, and from which in six years I had not gathered a bushel of nuts. I have also made a rock border, on which I have placed some choice alpines. With these exceptions my garden remains the same as when I made my last year's notes. As in most places it was a trying season, the mild winter, the late spring frosts, and the lengthened drought combined to tax one's capacities; but I do not think we suffered in our neighbourhood nearly as much as in some others from the two last causes. We had rain when we heard not a drop had fallen in other parts, and we heard of losses by the frost which we know nothing of. I think that perhaps I suffered most in the early Peas, some of which seemed regularly scorched by it. And as I have mentioned them I had perhaps better make these first notes to bear on vegetables. And here let me say, that in speaking of sorts I do not by any means wish to disparage others which I have not mentioned; but some are sent to me to try, and as my garden is small I am constantly obliged to refuse persons who wish me to try new varieties, as it would be simply impossible to try all, except to one's own great discomfort and loss. Take for example new Peas: their name is Legion, and still the cry is, They come! It would be impos-

sible for me to grow a row of each kind, and less than that hardly gives a fair trial. Moreover, let it be borne in mind that a great deal in all varieties of vegetables and fruits depends on soil and situation, and I by no means would imply that others, who give other varieties as the best, are not right in their conclusions as far as their situation is concerned.

In Peas I commenced last year with Sutton's Emerald Gem, Sutton's Ringleader, and Carter's First Crop, and also with a small quantity of Sutton's Bijou, a dwarf wrinkled Pea which is being sent out this spring. All these suffered more or less from the spring frosts, and the crops were not nearly so good as usual. The latter (Bijou) I look upon as a decided acquisition of the Little Gem type, a little taller (18 inches), but not so much so as to require stakes, the pods being in pairs, and I have counted from eight to ten good peas in many of them. From its greater productiveness, and from the fact that it is very difficult to procure a good strain of Little Gem, this Pea will be a valuable one, its flavour being excellent. Of later Peas I had the following:—Maclean's Best of All, of which I can only say that it well deserves its name; the crop was abundant, and the flavour, like all Dr. Maclean's Peas, excellent. Improved Princess Royal is another capital Pea for general purposes. Of later Peas I had samples of two new Peas sent to me by the Messrs. Sutton for trial—Giant Emerald Marrow and Duchess of Edinburgh. Of the former I have a very high opinion. Of its distinctness there can be no doubt: it has the same peculiar foliage of Emerald Gem—a rich glaucous green, unlike other Peas; but instead of being a dwarf round Pea, it is a tall (about 5 feet) wrinkled Marrow. The flavour is excellent, and the habit robust. I had an opportunity, besides seeing it in my own garden, of seeing it growing at Reading; and no Pea in the whole trial-ground was more robust. I question if any were so much so. Duchess of Edinburgh is a good wrinkled Marrow of the Ne Plus Ultra type; and if it be, as it promises to be, an improvement on that variety, it will surely be a favourite. For the later crops I had G. F. Wilson, an excellent Pea of the Veitch's Perfection type, and Berkshire Challenge, the latter a very vigorous and prolific Pea, requiring tall sticks.

The only vegetable that in any way takes the place of the Pea is the French Bean, and there is one which I think is destined to take the place of all others when it is more generally known—I mean Canadian Wonder. I have never seen anything to equal it for productiveness. I had three short rows of it, and the amount I gathered from them was positively wonderful. The pods were from 8 to 12 inches in length, and the flavour is excellent—no stringiness, and boiling green and tender. My opinion of it is such that I am not going to grow any other variety this season; and I find that the opinion of such men as Mr. Tillery of Welbeck and Mr. G. Abbey is equally favourable as regards its forcing qualities. Among the taller-growing Beans I had Champion Runner, a very prolific sort, but did not try the Butter Beans, about which so much has been said pro and con. I know that my neighbour Mr. Woodford did, but did not think a great deal of them.

It was a very trying season for Lettuces, and the most approved kinds were difficult to keep from running away. The value of such kinds as Tom Thumb, All the Year Round, and Commodore Nutt was never more apparent, although I myself greatly prefer the Cos Lettuce; but then they will in such dry hot summers so soon run away. I may here mention that I had some seed sent to me by Mr. Wright, gardener to the Hon. A. Leslie Melville, of Branston, Lincoln, which is much thought of by them. It seems to be a selected strain of the Bath Cos, dark in colour, and not liable to run so quickly as some sorts. I found that the only plan to secure Lettuces at all was to sow in succession a very small piece, thinning-out, and letting them stand where sown. Transplanting is fatal. And I have found nothing nothing better in Cos Lettuces than Sutton's Superb White or the well-known Paris White.

As I have something to say on the subject of Potatoes, I shall reserve them and other vegetables for another time.—D., *Deal.*

EXHIBITING ROSES NOT GROWN BY THE EXHIBITOR.

Could not some sort of society be started by amateur Rose-growers to prevent *soi-disant* "gentlemen" exhibiting Roses at shows, such Roses not being their own growing? No doubt many of our great nurserymen could tell of numerous applications to them for particular Roses by a certain day for the express purpose of staging them by the purchasers as their own at some local show. I only hope they, one and all, got a good showing-up themselves instead of the Roses.

A few years since a case in point occurred at a show held not many miles from this neighbourhood. I did not exhibit, but was anxious to know the winner of the first prize for Roses. After congratulating him upon his success, &c., I intimated a wish to see his Roses, if possible to ascertain wherein his marvellous success lay. I called at his rosery! What did I see? A piece of ground about the size of a good large room! No standards, he didn't "believe in them," a few miserable dwarfs barely existing. The secret of his success was patent at once: he obtained his blooms from a nursery—an after-confession too, and for two or three seasons he had with the greatest effrontery shown and taken prizes for them as his own growing; but the season following my visit he was disqualified, and, if I remember rightly, is now not allowed to enter his box. Does not the same thing happen at other shows? What is it but gambling in flowers too, and above all in Roses? I earnestly hope that some of your correspondents with abler pens than mine will take-up the cause, and, if possible, prevent such nefarious schemes.—Geo. W. Jessop, *An Amateur, Bexley.*

MINIATURE STANDARDS FOR HOUSE DECORATION.

The taste which takes pleasure in standards—Roses, Bays, Oranges, &c.—is often questioned by the hyper-artistic who call them by all sorts of stiff ungainly names, and say they are like nothing in nature, and seldom equalled in pure unmeaning ugliness by anything out of it; yet, despite bad name, ugliness and all, standards of many things are favourites with most of plain gardening people, and that not only in the flower garden, but with plants on a smaller scale for indoor and table decoration where a greater degree of artificiality is not only admissible but highly congruous. For this purpose it is best that the plants chosen should be naturally of a somewhat close bushy habit, and the foliage ornamental and not too large; and with these qualities in view some of the best things for the purpose will be found among our commoner plants, which almost everybody grows. The Golden Variegated Thyme, for the perfect symmetry of all its parts when grown as a natty little standard of 5 or 6 inches in height, would delight the heart of any dwarf-loving Chinaman. The easiest way to get them up is to select some year-old plants from a border where they have been pegged down, lifting them in autumn, and potting them in 3-inch pots. After they are somewhat established the stem should be pruned up to whatever height is thought most suitable for the purpose they are required for, and a little judicious stopping and tying soon secures nice semi-globular heads. The best place to grow them in is a cold frame fully exposed to the sun, plunging the pots overhead in charcoal, or, if that be not forthcoming, in coal ashes.

Another very nice plant, but requiring more care and patience, is the Ivy-leaved Geranium L'Elegante. For it a neat wire umbrella trellis is required, which should be painted green, and which, when the standard is perfectly grown, will be entirely hid except the stalk. When the head is fully formed a charming roseate hue can be given to the leaves of both this and the Golden Thyme by puncturing the stems, or by cutting them half through and exposing them fully to the sun.

A very nice and rather curious little standard can be formed by grafting Iresine Lindeni upon the golden-veined variety, I. Verschaffelti. Let the latter be grown until it be 7 or 8 inches high, and then stopped above a joint. After the side shoots have grown away a little remove them all, except the second pair from the top, trim off the top of the stem to where the uppermost pair of laterals were removed, and there wedge-graft a shoot of Lindeni upon it. So easily do they unite that, unless for custom's sake, no wax or clay need be used, all that is necessary being to tie well with soft bast, and round that to bind a little sphagnum. Of course they require shading for some time, and to be placed in a mild moist heat. It is also requisite that the stock and graft should be in about the same condition as to age and hardness of wood. As soon as the graft has taken and begun to grow, the top must be pinched off, and at the same time the two laterals that were left on the stock will need to be stopped either at the first or second joint, and the result will be four shoots, which will

form an elegant border round the head of our composite standard. In this case also a wire trellis is needful, which, when the head is perfectly moulded, either may or may not be removed, according as it is clumsy or otherwise.

The common small-leaved Myrtle as a standard in a tiny tub has an antique air about it, and it is easily grown without wires.

Very beautiful also is the Lavender Cotton plant (Santolina incana), with leafage like delicate silver filligreework, more especially by gaslight.

In growing all such small ware the pots must be kept plunged, and care taken that they do not root into the material used, otherwise on removal they may receive a check which their small stock of vitality may not be able to overcome.—R. D. Taylor.

SIZE OF SETS AND SPACES FOR PLANTING POTATOES.

The best answers to your correspondent "Kittie's" inquiries are furnished by the results of the exhaustive, costly, and carefully-conducted experiments of Mr. George Maw, F.L.S., on the Potato crop at Benthall, near Brosely, in 1864 and 1865, and reported in the "Journal of the Royal Agricultural Society," vol. iii., part ii., as a prize essay, and which will well repay careful perusal.

Mr. Maw in the latter year carried out 129 experiments with various kinds of Potatoes in general cultivation on as many trial plots extending over many acres, using sets of various sizes, both whole and cut, planted with various manures, at different distances, but all in rows 2 feet apart; and in the recapitulation of the general bearing of his systematic experiments, the results of which he describes in detail, he states that—

"Firstly, Every increase in the size of the set, from 1 oz. up to 8 ozs. in weight, produces an increase in the crop much greater than the additional weight of the set planted. The nett profit over and above the extra weight of the sets in planting 4-oz. sets in lieu of 1-oz. sets, amounted on the whole series of experiments to between 3 and 4 tons per acre; and the further profit on the increase of the size of the set, from 4 ozs. to 8 ozs., averaged about 5 tons an acre, all the intermediate steps partaking proportionately of the increase.

"Secondly, The advantages in favour of the large sets are more marked in the late than in the early varieties.

"Thirdly, In the use of small sets of from 1 oz. to 3 ozs. in weight, a larger balance over and above the weight of the sets was obtained by planting from 6 to 9 inches apart in the rows than at wider intervals.

"Fourthly, Increasing the intervals at which the sets are planted, even of the largest size, in the rows to more than 12 inches, diminishes the crop, and the wider intervals induce no increase in the weight of the produce of the individual sets.

"Fifthly, It may be broadly stated that the weight of the crop is proportionate to the weight per acre of the sets, and that small sets will produce the same crop as an equal weight per acre of large sets. The fact is, however, of limited application, as a weight of very small sets equal to a weight of full-sized Potatoes could not be got into the ground, except by planting them so close as to be prejudicial to the crop. The advantage, therefore, of large sets remains practically unimpaired.

"Sixthly, Weight for weight cut sets produce, as nearly as possible, the same weight per acre as whole Potatoes; but for the reasons given above the weight of the sets should not be reduced by subdivision.

"Seventhly, Smaller sets give a larger produce in proportion to their weight than the larger sets.

"Eightbly, When the intervals between the sets in the rows are diminished to less than a foot, the produce of each individual set is proportionately diminished. Though this is not necessarily accompanied by a diminution of the weight of the crop, no increase in the produce of each individual set is caused by placing the sets at intervals wider than a foot.

"Ninthly, With reference to the relative produce of different varieties, a late red sort takes the precedence throughout the experiments; and of the several varieties of Fluke, 'Spencer's King of Flukes' and 'The Queen of Flukes' are much more prolific than the ordinary variety."

But as Mr. Maw's experiments appear to have been conducted principally in one season, and on one kind of soil, and with a view to economical results as a farm crop, some allowance may be made both for season and for the quality and depth of soil, and also for garden cultivation, when it is sometimes found economical to plant the Potatoes in rows at wider distances apart for the purpose of providing for the more vigorous growth and taller tops, or for an intermediate crop of Broccoli, Cabbage, or Brussels Sprouts, which is often secured with advantage by planting them between the rows of Potatoes before the latter are lifted—a practice followed by many experienced gardeners; in which case the rows should not be less than 3 feet apart. Mr. Maw's distance of 2 feet apart may, however, be taken as a fair average for ordinary cultivation. A less distance, taking 14 inches as a minimum, will generally secure a first early crop, and 3 feet as a maximum for a late crop of the coarser-growing sorts, but soil and season must not be lost sight of. Wide intervals between the rows, from the extra ridging or earthing they lead to, tend to make the Potato a preparatory fertilising and cleansing crop, an object which Mr. Maw does not appear to have had in view in calculating economically the results. The preparatory and fertilising effects of the Potato as a farm crop are well recognised in some of the alluvial low lands of Lincolnshire and Cambridgeshire, where it has of late years become a common practice to alternate advantageously Potatoes with Wheat successively for several years.

Another paper, I believe also a prize essay, of the Royal Agricultural Society by the Rev. E. F. Manby on the cultivation of early Potatoes, furnishes a good deal of information as to their profitable cultivation.—Thomas Laxton, *Stamford.*

SELECTION OF FRUITS.

Having under my charge about sixty varieties of Apples, I have much pleasure in forwarding you a list of forty-five sorts—viz., thirty dessert and fifteen kitchen varieties. All the kinds herein named are good, and according to my experience would not be easily beaten for succession and quality combined.

Dessert.

Ashmead's Kernel
Brabant Bellefleur
Court Pendu Plat
Dutch Mignonne
Early Harvest
Early Joe
Juneating, Red
Maclean's Favourite
Margil
Nonpareil, Early
Nonpareil, Braddick's
Nonpareil, Pitmaston
Nonpareil, Scarlet
Pearmain, Baxter's
Pearmain, Claygate
Pearmain, Mannington's (one of the latest)
Pippin, Cox's Orange
Pippin, Ribston
Pippin, Golden
Pippin, Spring (or Baddow)
Pippin, Hughes' Golden
Pippin, Sturmer (very late)
Pippin, Wadhurst
Pippin, Wyken
Pomme Royale
Russet, Pyke House
Reinette, Golden
Reinette, Grise d'Or
Pine Apple Russet

Kitchen.

Blenheim Orange
Beauty of Kent
Bedfordshire Foundling
Calville Blanche
Dutch Codlin
Dumelow's Seedling (or Wellington)
Gravenstein
Hollandbury Pippin (splendid colour)
Mère de Ménage
Northern Greening (one of the latest)
Reinette du Canada
Tower of Glammis (a good sort)
Waltham Abbey Seedling (good)
Warner's King (a very fine sort)
Winter Colman (very late)

It may be well to mention that all the varieties named are grown as bush or dwarf pyramids, and usually bear good crops of fruit. But last season being an unusually bad one for Apples, many of the trees here bore very little or no fruit, the blossoms being completely cut off by the late frosts of the last spring.—G. A. Bromfield, *Prittlewell, Essex.*

ROSES TO CLIMB UNDER GLASS.

Yellow.—Maréchal Niel, Gloire de Dijon, Triomphe de Rennes, Céline Forestier, and Mdlle. Aristide. *Nankeen and Copper.*—Ophirie. *Crimson.*—Général Jacqueminot and Charles Lefebvre. *Rosy Crimson.*—Madame Louise Carique and John Hopper. *Rose Colour.*—Anna Alexieff, Baronne Prevost, La Ville de St. Denis, and Souvenir de la Reine d'Angleterre. *Bright Cherry.*—Jules Margottin and Edward Morren. *White.*—Acidalie. *Bright Red.*—Vicomtesse de Vezins, Glory of Waltham, and Madame C. Joigneaux. *Maroon.*—Empéreur de Maroc. *Blood Purple.*—Pierre Notting. *Blush.*—Souvenir de la Malmaison.

The five first are the strongest growers. Aristide is the strongest grower of all. All will make fine climbers, say 10 feet high or more according to cultivation. The best type of a pole or wall Rose is Ophirie; it covers all its stems with leaves or flowers, and blooms from its base.—W. F. Radclyffe.

The Connoisseur Pea.—I have been favoured last year by several firms with samples of Peas for trial. One remarkable Pea Mr. Laxton sent me with a few other kinds for trial.

What I wish to name is Connoisseur. This Pea is remarkable, and it would be of interest to know its history. My trial was on the limestone, and after sowing scarcely any rain fell during the growth. After all the other Peas were dead Connoisseur was "as green as a Leek." It was a perpetual bloomer and cropper, commenced to fill in July, and bloomed until October. I have heard that there is a difficulty to grow Peas in hot climates, but I fancy we have one in Connoisseur that will be of great service abroad, and also to those that require Peas, say, in October.—R. H. D., *Seaham.*

ROYAL HORTICULTURAL SOCIETY.

JANUARY 20TH.

FRUIT COMMITTEE.—G. F. Wilson, Esq., F.R.S., in the chair. A seedling Apple was exhibited by Mr. John Cox of Redleaf, raised from Golden Knob. It is somewhat larger than Golden Knob, of a bright golden russet colour, and with a flesh as tender as that of Cox's Orange Pippin—juicy, rich, and vinous. It was called Redleaf Russet, and received a first-class certificate. Messrs. James Carter & Co. of Holborn sent handsome specimens of Esopus Spitzenberg Apple from California. They were highly coloured, and, though past their best, still retained some of the fine flavour of that excellent Apple. Messrs. Stuart and Mein of Kelso sent several dishes of Apples they had received from Mr. G. Taylor, of Kalamazoo in the State of Michigan, which were much admired for their beauty of colour; but it was the general opinion that they were deficient in flavour. A letter of thanks was awarded to Messrs. Stuart & Mein. A collection also came from Rev. R. O. Bromfield, of Sprouston, N.B., consisting of Golden Noble, Northern Spy, Cellini, American Mother, Mère de Ménage, Gravenstein, Small's Admirable, Royal Pearmain, and Cox's Orange Pippin, all of which were well grown and handsome. Cox's Orange was excellent in flavour. A cultural commendation was unanimously awarded to them. Alfred Smee, Esq., exhibited a dish of Spanish Chestnuts of the crop of 1873, which had been preserved in dry sand, and kept in a dry garden shed. They were as plump and fresh as if they had been newly-gathered, and preserved all their original flavour.

Mr. Battera, gardener, Chilworth Manor, Romsey, exhibited a dish of New Potatoes and Mushrooms, and a fruit of the Variegated Pine Apple, to which a letter of thanks was awarded. Mr. John Stirling of Park Wern, Swansea, sent a dish of Mushrooms. Mr. E. Bennett, gardener to the Marquis of Salisbury, Hatfield, sent four varieties of Cucumbers—Masters' Prolific, Improved Sion House, Duke of Edinburgh, and Telegraph. That which was shown for Improved Sion House was Masters' Prolific; the former being spineless, and the latter having white spines. Mr. Denning, gardener to Lord Londesborough, sent a Cucumber called Epicurean. Mr. G. T. Miles, gardener to Lord Carrington, Wycombe Abbey, sent two very handsome Charlotte Rothschild Pines, which were awarded a cultural commendation.

FLORAL COMMITTEE.—Mr. B. S. Williams in the chair. It was not to be expected that large collections of plants would be sent so early in the year, although for the season the day was remarkably mild, so much so that Orchids and other tender plants might have been brought without fear of damage. A few nice groups of exotic plants were sent by some of the trade growers. Mr. John Wills of Onslow Square staged a very effective group, comprising some nice plants adapted for dinner-table decoration, notably Cocos Weddeliana, universally acknowledged as the most graceful of Palms, Aralia Veitchii also a most famous table plant, Aralia leptophylla, Chamædorea elegans, and Ficus Cooperi, a good decorative species with crimson veins on the leaves. Messrs. Veitch of the Royal Exotic Nursery, King's Road, Chelsea, sent a very fine group of Cyclamens, and a very fine strain of double Chinese Primula from seed. The collection of Primula contained thirty-six pots, the flowers and plants so much alike that one would have thought that all had been propagated from cuttings from a common centre. This strain is named P. sinensis kermesina flore-pleno. The collection of Cyclamens contained some very fine varieties, of which the pure white and deep purplish crimson flowers are the most desirable.

Mr. W. Bull of King's Road, Chelsea, sent a collection of Cycadaceous plants, comprising Dion edule, a very neat-habited species; Macrozamia spiralis, Encephalartos villosus, ampliatus, and others rare and fine, many of them remarkable for the very small pots in which they are grown; but it may be useful to note in passing that all this class of plants succeed most satisfactorily in small pots. To the above collections votes of thanks were given.

New plants were exhibited by Messrs. Veitch, who had Nepenthes intermedia, a hybrid between N. Rafflesiana and an unnamed species with spotted pitchers. It is a very neat-growing species, and the pitchers are very prettily spotted. A first-class certificate was awarded. Mr. Bull had Sophronitis grandiflora superba, flowers large, but not so brilliant as many we have seen; Arisæma sp.; Oncidium pelicanum, with a small spike of yellow and brown-spotted flowers; Hippeastrum Acme, the flower is badly shaped, but the colour a brilliant crimson; Zamia Roezlii, in too small a state to form an opinion of it. A new double Primula sinensis, The Champion, was sent by Mr. H. Harris, gardener to A. Ashby, Esq., Naseby Wooleys, Rugby; the flowers are quite double, of a dull red colour, and freely produced. From Messrs. E. G. Henderson & Son, Wellington Road, St. John's Wood, came Hippeastrum Hendersonii Adrian and Minnie Warren, good flowers, but not superior to many already sent out; Dracæna Duffii, a species with bold, bronzy, metallic leaves edged with crimson. Mr. C. Green, Holmesdale Road, Reigate, sent Prenanthes hybrida elegans, the leaves finely cut. From the Society's own gardens came a group of Chinese Primula of a distinct strain. Mr. R. Parker of Tooting sent cut flowers of Aponogeton distachyon grown in the open air without any protection. This is a very pretty thing, and flowers freely in shallow water in the open air about London. The pure white flowers are very sweet.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE annual Meeting of the Gardeners' Benevolent Institution was held at the Bedford Hotel, Covent Garden, on the evening of Thursday last the 14th inst., Dr. Hogg in the chair. The annual report of the Institution was read, by which it appeared that there were seventy-two pensioners on the Charity receiving £930 annually, that the income amounted to £1747, and that there was now an invested capital of £10,400 in consols. Dr. Hogg was elected a Trustee of the Institution in room of Mr. Huggins, deceased.

TESTIMONIAL TO MR. CUTLER.—After the close of the annual Meeting a supper was provided at Simpson's in the Strand, at which between sixty and seventy members of the Institution were present, to celebrate the presentation of a Testimonial to Mr. Cutler, after thirty-two years' service as Secretary to the Institution. The chair was taken by Dr. Hogg, supported on the right by Mr. John Lee of Hammersmith, and on the left by Mr. Robert Wrench of London Bridge. The company included many of the leading representatives of horticulture. The Testimonial was a very handsome one, the sum realised being £250. It consisted of a very handsome silver tea and coffee service with salver, table forks and spoons, and a massive gold watch-chain; in addition to which were a valuable diamond half-hoop ring and gold watch-chain to Mrs. Cutler.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

EUCALYPTUS CORNUTA. *Nat. ord.*, Myrtaceæ. *Linn.*, Icosandria Monogynia.—Flowers scarlet and yellow. "Amongst the wonderful forms of Australian vegetation this is not the least striking, whether from its singular structure or the colouring of its inflorescence. It is a native of South-Western Australia, where it was discovered by Labillardière in the beginning of the century; and from whence numerous dried specimens are in the Kew Herbarium, from Cunningham, Drummond, Oldfield, Harvey, and others, collected from King George's Sound eastward to Cape Riche. It is the 'Yeit' of the colonists, and, according to Oldfield's notes, it must be a very variable tree, as he describes some specimens as from trees 10 feet high, others from trees 30 to 40 feet high, and others still from trees of 80 to 100 feet high. The bark he describes as rough, hard, persistent, and light brown in the larger trees; as black and half fibrous in others; and as smooth in the smaller trees. At Kew, where two specimens are cultivated in tubs in the south octagon of the temperate house, it forms a slender tree about 9 feet high, with smooth bark and spreading branches."—(*Bot. Mag.*, *t.* 6140.)

CROCUS BYZANTINUS. *Nat. ord.*, Iridaceæ. *Linn*, Triandria Monogynia. — Flowers purple. Native of Transylvania.—(*Ibid.*, *t.* 6141.)

JAMESIA AMERICANA. *Nat. ord.*, Saxifragaceæ. *Linn.*, Dec. andria Digynia.—Native of Rocky Mountains. Flowers white "First described from imperfect specimens by Torrey and Gray in 1840, and named by them 'in commemoration of the scientific services of Dr. Edwin James, its worthy discoverer, the botanist and historian of Major Long's expedition to the Rocky Mountains in 1820, and who during the journey made an excellent collection of plants under the most unfavourable circumstances.' Those were the days when every traveller in the Rocky Mountains carried his life in his hand, and

when to hold it fast reqnired the snbtlety of the savage plus the pluck of the white man. Little was known of this plant for many subsequent years, not nntil it was gathered by Fendler in 1847, and after another long interval by C. C. Parry in 1861, in the very spot where James had discovered it—namely, the head waters of Clear Creek, and on Alpine ridges east of Middle Park, in the Colorado territory, lat. 40° N."—(*Ibid.*, *t.* 6142.)

Blumenbachia chuquitensis. *Nat. ord.*, Loaseæ. *Linn.*, Polyadelphia Polysandria.—Flowers orange and yellow. "A handsome Peruvian herbaceous plant, allied to the Chilian B. coronata, but differing wholly in habit, this having a stout erect, or suberect and leafy stem, with the petioles and axillary peduncles shorter than the leaf-blade, and B. coronata being a tufted plant, with a short procumbent stem, very slender petioles much longer than the blade, and long scape-like peduncles rising from the ground. It was imported from Peru by Messrs. Veitch in 1863, through their collector Mr. Pearce, and there are indigenous specimens in the Kew Herbarium, collected by Lechler in Peru, at San Antonio.

"B. chuquitensis flowered in Messrs. Veitch's establishment in September, and is quite hardy. When first sent to view to be named, in 1865, it was supposed to be the C. coronata, under which name Mr. Veitch has consequently distributed it."—(*Ibid.*, *t.* 6143.)

Odontoglossum maxillare. *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria.—Native of Mexico. Flowers white with purple blotches.—(*Ibid.*, *t.* 6144.)

GOLDEN CHAMPION GRAPE.

In reply to Mr. Grieve, I have to say that the Golden Champion was not a sport from any other Vine. It was raised from seed taken out of a berry that was obtained by a cross between the Bowood Muscat and Black Hamburgh, but which was a shy setter, though the berries that did set were very large.

I cannot help thinking that Mr. Grieve is under some mistake when he supposes that his rod of Trebbiano has produced a bunch of Golden Champion. The subject is a very interesting one; and knowing Mr. Grieve to be a man well accustomed to close observation of vegetable distinctions, whether these appear in fruit or flowers, I for one shall feel obliged if he will say whether the foliage of the lateral that produced the supposed Golden Champion bunch on the Trebbiano rod was the foliage of that Vine or of the Golden Champion, for they are very distinct; and if he has saved the wood of the lateral in question, will he grow an eye of it or send me one? and I will grow it, and if possible throw some light on the matter. Is it not possible that the bunch in question was just a short well-swelled bunch of Trebbiano, with berries nearly as large as Golden Champion? The spot on the berry is no criterion, for I have seen Trebbiano, and even Muscats, have the same spot as Golden Champion when grown in too damp an atmosphere.

There was a short plump bunch of Gros Guillaume (Barbarossa), shown at the International Show in Glasgow exceedingly like a Black Hamburgh, and it passed the ordeal of the judges as such, though I and others prononnced it to be what it really was—Gros Guillaume. It was named Pennington Hall Hamburgh, and was offered to the public as a new variety of Hamburgh, when its grower, if he had any discriminating powers at all, must have known by the growth of the Vine and its foliage that it was not a Hamburgh, but a well-known Vine, perfectly distinct from every other. Here, then, we have a Grape, as a rule producing large, long, and heavily-shouldered bunches, producing at times bunches so like the Black Hamburgh as to deceive good judges. No such deception could have taken place had they seen it on the Vine. I mention this circumstance that Mr. Grieve may see that it is necessary to take the foliage and wood into consideration before deciding that the bunch he writes about is Golden Champion.

The Golden Champion will not succeed as a late Grape in a damp atmosphere, but if grown in a Hamburgh house, in a rather dry atmosphere, it will produce splendid fruit that will keep till Christmas.—W. Thomson, *Tweed Vineyard.*

NOVELTIES IN THE ROYAL GARDENS, KEW.

In the Succulent house we observe an unusually fine specimen of the Turk's Cap, Melocactus communis. It has just been imported, and, like all that have formed the cap, is only of use to exhibit the peculiar character of the species until the time when it is pleased to die. Its height is about 2½ feet, though it is said rarely to attain more than 2 feet. The plant resembles an Echinocactus, and the flowering part produced on the summit consists of a dense cylindrical mass of woolly hairs and slender red spines, among which appear the small Mammillaria-like flowers; in this case it is more than a foot high. From a fancied resemblance it has earned for the plant the name of Turk's Cap. It is also known as Pope's Head and Englishman's Head, the latter presumably by way of compliment, it being known to the French as *tête-à-l'Anglais*. It grows in the arid districts of South America and the West Indies, where the mules conveniently quench their thirst by drinking the juice of the interior, after first removing the spines with their feet. If desired to cultivate, small plants should be obtained from a nurseryman, or they may be imported without soil in a box of any dry loose material that will preserve them from injuring one another. On arrival they should be placed on a dry surface in the full sun, or may be potted, but in either case must be kept dry until there is an inclination to grow. In winter a temperature of 50° is sufficient, but in summer they will not be the worse for the highest degree of heat convenient, with a proportionate amount of moisture. In the cultivation of Cacti many prefer potting to be done in June, as at that time a large proportion commence growth, a preference, of course, on the assumption that plants should not have fresh soil until the roots are ready to make active use of it, because of its getting out of condition. But as Cacti do not require water until growth commences, the rule does not apply with so much force, and there seems no reason, if more convenient, why potting should not be done from February onwards; indeed, by experiment it is found to answer.

Among the Orchids is a very interesting Dendrobium, D. tetragonum. It is chiefly remarkable from the long tetragonal pseudobulbs, which are pendulous and terminate in a pair of leaves. The flowers are not highly coloured, but yet from their number and peculiar form cannot be considered unattractive. The perianth segments are narrow, the two lateral segments curiously twisted. It is a native of Moreton Bay, Australia, and does well on a block in a cool house. Masdevallia attenuata, a charming though diminutive species, must also be mentioned. It was first described three years ago, then introduced by the Messrs. Veitch from Costa Rica. The height does not exceed 3 inches, and among the numerous leaves appear many sweetly-scented white flowers with orange-coloured tails. This plant is growing freely suspended in a basket, a position that is often convenient, as it insures safety from outrage by slugs.

DISEASE OF CUCUMBER ROOTS—VIBRIOS.

I am very glad to find that my observations on the presence of a parasitic Nematoid in the nodules which frequently occur in the roots of Cucumbers and Melons, and which have also been found in Gardenia, have attracted attention. I used the word Vibrio in the sense in which it was originally employed by Müller and Bauer, as more immediately intelligible than a new term to persons acquainted with Vibrio Tritici, which is now Tylenchus Tritici, *Bastian*. It is quite true that the term Vibrio is now applied to a different set of organisms. Those who wish for an account of the rather extensive family of Anguillulidæ may consult Dr. Bastian's paper in the "Transactions" of the Linnean Society, vol. xxv., p. 73, 1865. The species in question is not included in the paper, as I was well aware when I recorded its occurrence a second time under the old name of Vibrio.—M. J. Berkeley.

OUR BORDER ADONIS-FLOWERS.

We hail with pleasure the early flowers of our borders, and look upon them as the harbingers of spring in whatever garb they appear, and we bid them welcome, though of short duration.

The Adonis family is but a small one, comparatively speaking, but we treasure them in our memories as well as in our borders and spring gardens.

Adonis vernalis, called by some "The God of Love," is of easy culture, requiring a good loam mixed with limestone grit, well-rotted manure, leaf mould, and a little sandy peat, well drained, but watered when required. The soil in the border should be broken up to the depth of 18 or 20 inches, and the above particularised compost incorporated with it; the aspect should be sunny, and when planted they should be firmly

placed in the soil. They may be successfully grown in pots plunged in ashes in the reserve ground. When wanted for the spring garden they are best grown in pots, and plunged where they are wished to grow, for they are then easily removed when their bloom is past. While in bloom they are very gay for the cool greenhouse in early spring. They are rather impatient about being disturbed when they are once established. They may be increased by division, but I prefer raising them from seed.

I have sown the seed as soon as ripe, placed the seed pan in a cold pit, and the seedlings made their appearance in the following spring. When they have completed their first growth they may be potted, and placed in a cold pit, or plunged in the reserve ground until they are required for planting out.

I often wonder the Adonises are not more cultivated. Vernalis (yellow-fleshed) is the most desirable of the family for either rockwork or border. Adonis pyrenaica (yellow-flowered) is a very desirable plant, growing a little taller than vernalis, and is later in blooming; it does well on the rockery. A. sibirica (yellow-flowered), introduced nearly fifty years ago, is very rarely seen. A. apennina (yellow-flowered), ought to be in more general cultivation; being of dwarf compact habit, is very desirable for the rockery, border, or spring garden.

There is little difference in the colour of those I have enumerated, but being spring-flowering plants they ought to be more frequently met with; they cannot fail to repay any extra labour that may be bestowed upon them. We have an annual species known among many of our cottagers as the "Pheasant's-eye" (Adonis autumnalis), a very pretty crimson border flower. Some doubt is entertained about its being one of our own native plants.—VERITAS.

BUDDING.

"A. C." in the number of December 10th recommends the use of a quill in Rose-budding, and says, "One chief requisite of budding now is a bundle of toothpicks." Necessity compels me to carry a toothpick, but for the purpose its name denotes. Certainly not as an aid in the operation of budding.

I am equally successful with "A. C.," and should like to make known the method I adopt in separating the wood from the shield. I learnt it some years ago from a gardener who was in the habit of inserting a thousand buds a-day (at least so he told me), and it may account for his, to me, astonishing dexterity.

To begin with, then, disabuse your mind of the idea that the taking out of the wood is the most delicate part of the operation of budding, or, in fact, delicate at all. The way I shall attempt to describe may be rather characterised as "rough and ready." Insert the knife below the leafstalk in the ordinary way, but bring it out very obliquely, so as to leave a piece of the bark beyond the wood long enough to take between the finger and thumb, then take the end of the wood in the same way with the other hand and snatch the wood and shield asunder. Unless the wood is very green and tender the operation is ninety-nine times out of a hundred perfect, and if it should not be, then use your toothpick.

My instructor did not complete the severance of the bud from the stem with the knife, but pulled them asunder, tearing off some inches of bark with the bud, but this I found generally damaged the buds remaining on the wood.—HUBERT BENSTED, *Maidstone.*

ACACIA AFFINIS.

MANY of the New Holland Acacias are very beautiful and worthy of more extended cultivation, especially as they are so easily grown, bearing rougher treatment than most of the beautiful plants we get from that country, so rich in flowering shrubs.

I enclose with these notes a small branch with flowers of an Acacia we have under the above name. I am not quite certain if the name is correct, but it is one of the most beautiful of the Acacia family, and, what makes it doubly valuable here, it is perfectly hardy. The racemes with their many flowers, which I have sent, were taken from a plant growing on latticework of a verandah, where frost has free access on all sides.

A few years ago we had a large plant growing on the back wall of a greenhouse, where it used to bloom most profusely, and furnish us with thousands of its long bunches of golden flowers for cutting at this dull season, when there is but little but what we have from the forcing pit.

At that time I had a large plant that was of no use to us under glass. I was tempted to try it outside on a wall with south-east aspect, with very pleasing results; for it soon reached the top of the wall, which is about 14 feet high. Its very rapid growth I attribute to its roots having extended into a rich open Vine border—soil just suited to its wants. This plant, growing so well and so admired by everybody who saw it, I was induced to plant one on the verandah abovenamed, and with the like pleasing results.

The early flowering of the plant this season—having commenced to flower in December—is no doubt caused by the very dry summer, and consequent early ripening of the wood and development of flower buds. Since the plants have been out we have had on many occasions 12° and 16° of frost, but I have never known the unexpanded flower to be injured.

I would say to all lovers of beautiful wall plants who reside in the warmest parts of the British isles, Plant the above Acacia; and should it never favour you with a flower, its beautiful bipinnate, light-green, Fern-like leaves, differing from everything you have, and forming a pleasing contrast to all that is near, will be ample compensation for the trouble taken. —W. OSBORNE, *Co. Cork.*

[The specimen was of the species intended. The name Mr. Osborne has applied to this Acacia is one of the several synonyms of the plant now called by botanists Acacia dealbata. There is a portrait of it in the "Botanical Register" under the name of Acacia decurrens. It is a native of Van Diemen's Land, where it is called "The Green Wattle."—EDS.]

AMBURY OF CUCUMBER ROOTS.

I READ Mr. Platt's article on Cucumbers, and I suppose it is in the winter months when he is troubled with what we know as "ambury." The soil I consider is the chief point requiring attention, and the less complicated it is the better. I have found that "mixtures" generally encourage the ambury, especially when some kinds of leaf mould are added. What I find to answer is two parts of turfy loam chopped rough, one part of short litter fresh from the stables, with a sprinkling of half-inch bones. In planting I make a small mound, plant in the centre, and as the roots work through add a little fresh soil.

Has Mr. Platt grown Improved Sion House Cucumber? If not, I would strongly recommend it for winter work. For summer Blue Gown takes the lead with me. I hope he will give my method a trial, and be able to report favourably at some future time.—J. WILSON.

METEOROLOGY OF THE PAST YEAR, AND ITS EFFECTS ON VEGETATION.

TAKING water first for consideration, I will consider in what way the supply of 1874 met the wants of that year; but to do this we must begin at the beginning of the season, or rather we must go back to the last two months of 1873, as I consider the rain that falls then when taken in addition to that which falls the following three months to have an important effect on the sources from which our summer's supplies are drawn—in other words, the autumn and winter rainfall tell in the following spring and summer. Believing such to be the case, we are not surprised at the outcry for water in many places during the past summer for water for domestic uses, when we find that only a very trifle over 5½ inches of rain fell in the autumn and winter five months of November and December 1873, and the three first months of 1874, which was not increased to any useful extent by what fell in the following April, the total then barely reaching 7½ inches. But somehow the rainfall of the next two months sufficed to keep vegetation moving; so that, although there was a lack of water almost everywhere for almost all needful purposes, there have been seasons in which vegetation has suffered more than in 1874. The long period of dull deluging weather we had all through May and June, and up almost to the middle of July, rendered a heavy rainfall unnecessary—in fact I am not sure that it would not positively have been an injury; but as it was, the showers in these months were sufficient to prevent surface crops, as grass, &c., from suffering so much as we have known them to do in former years; so that, although the growth was restricted, it was hardly ever arrested entirely, and fields in general never had that burnt-up appearance we have often known. Garden crops in like manner being affected accordingly, established things struggling through tolerably well-but newly planted ones having more or less of a trial. The

absence of heat, which will be spoken of hereafter, having much to do with the growing period alluded to. But with August more warmth set in, and the following two months of September and October being both more fruitful in rain, a rapid growth in most vegetable substances was the result. The ground becoming heated by the bright sun of the latter part of July and the whole of August, all the Cabbage and kindred tribes of plants made rapid progress, and the same may be said of the bedding plants. Frost, however, intervened somewhat sooner than usual, to the injury of the latter, while a heavy rainfall towards the end of October was beneficial many ways. November as a whole was fine, the roads for a considerable time being all but dusty. And the early part of December was also on the whole fine until the 16th, when a rather heavy covering of snow fell on ground but slightly frozen over; and this being repeated the following day, gave us a fall of snow equivalent to about an inch of rain, and which lasted with very little diminution up to the end of the year, with frost every day sufficiently hard to enable skating to commence on 22nd and continue for ten days—an unusual thing with us. The severity of the frost, however, increased very much the last two days, the thermometer falling to 12° Fahr. on 31st, the lowest it has been since 1867. Fortunately, however, the ground was covered with snow, that the injury to crops will not, I expect, be so severe as on some former occasions; and the generally good condition things were in when it commenced will all tend to lessen the effects it might otherwise have produced.

Up to the end of April the season was on the whole an early one, and the prospects of fruit were good; but with the commencement of May the hopes of the fruit-grower became blighted. Frosts, at first moderate, culminated at length in a very severe one on 10th, which was by no means the last, as a repetition on 16th and 18th, and with one as late as June 13th, told a tale which resulted in many orchards being complete failures, while others braved it out. But these unusually late frosts with the accompanying cold weather gave such encouragement to the insect family of all kinds, that the Hop, which perhaps is more susceptible to attacks of that kind than most other plants, has been in many places a complete failure; and many other crops have also been indifferent. Even the hay crop was light in consequence of the cold ungenial weather at the time it ought to have been growing. And in gardening matters the bedding-out period was retarded very much. Perhaps the latter was fortunate rather than otherwise, as it not unusually happens that a fine early season tempts one to plant out before it ought to be done. As it was, however, the prospect at the end of June was the reverse to encouraging; but better weather setting in things improved, and in most cases the crops of fruit ripened-off well when there was any. Even those trees that were heavily laden—which many Plum trees were to the breaking-down point—in most places attained a fair average size, especially the late kinds. And the same may be said of Apples and Pears, while the Corn crop is reported everywhere as good; and what is also encouraging, the general appearance of fruit trees is good for another year—a matter that ought not to be lost sight of, as I consider a well-developed fruit blossom in embryo as more likely to withstand frost in spring than an indifferently formed one; in fact I do not know but 2° or 3° difference of temperature, &c., could be given in the one case and still have a better result. But as this has been alluded to before, we may in conclusion give a passing word on vegetables.

We have said that the dry sunny weather of the latter part of July, together with August and the greater part of September, had heated the ground so as to cause a rapid and vigorous growth to take place when the autumn rain fairly set in, which growth continued through October, notwithstanding the check of a rather sharp frost rather early in that month and more severe one on the 25th and 26th, the result being that most of the Broccoli and Cabbage tribe attained an undue height; and growth continuing on until late in November, they were in a great measure in a bad condition to resist the frosts that commenced early in December. But these frosts being moderate at first, we hope that all the dwarf varieties will have been gradually inured to it, and that they may escape; but we much fear for some plots of the taller kinds that the snow did not protect sufficiently, and which we accidentally omitted to lay down in time. We fear that many of them will be useless for this season, more especially if another severe frost follows, for which there is ample time yet; but on the whole the frost has not been so destructive as on many other occasions, as all vegetable crops covered with the snow have in general escaped. The rainfall of England in 1874 being about 3 inches, and that of 1873 2½ inches below the average, these shortcomings of our water supply in the past summer are in some measure accounted for; at the same time the rainfall of 1872 was far in excess of both these deficiencies.

	Rain in inches.		Rain in inches.
Jannary	1·27	August	2·07
February	1·31	September	3·02
March	0·83	October	3·59
April	1·91	November	1·98
May	1·21	December	2·95
June	2·63		
July	0·72	Total for 1874	23·49

—J. Robson, *Maidstone.*

TRUFFLE HUNTING IN ENGLAND.

As I was walking along the high road lately in the neighbourhood of the village of Micheldever, Hampshire, I came upon an old man with a couple of dogs, as I thought, ferreting by the roadside. On asking him what he was doing, he put his hand into a canvas bag which he had slung over his shoulder, and producing two or three small roots or bulbs said, "Hunting for these." On asking what they were he told me they were Truffles, that it was his regular business hunting for them, and that he sent them up to London.

The dogs were two very intelligent little creatures, both small, one smooth-coated with a very short pug nose, the other apparently something of a small Bedlington terrier. I watched them for a short time, and soon saw the short-nosed dog begin to scratch at the root of a Larch, when the man went up with a hoe and quickly dug out another Truffle about the size of a good walnut. We all know it is a practice to hunt for Truffles in France with dogs, but I thought so unusual a circumstance in England might be interesting to your readers.—T. C. Burnell.

NOTES AND GLEANINGS.

Royal Horticultural Society.—The Carter Cup and other prizes offered in the schedules of the Society by Messrs. James Carter & Co., for competition at the Society's Great Provincial Show, has now been arranged to take place on the 7th of July at the Society's Gardens, South Kensington.

—— It has been announced that Mr. Henry J. Elwes, F.Z.S., F.L.S., is about to issue a monograph on the genus Lilium, with plates drawn by Mr. W. H. Fitch, F.L.S. The work will be issued in parts, each containing eight plates, at the price of one guinea per part.

—— The ship "Tintern Abbey" has recently sailed for New Zealand, having on board no less than 1130 living birds—viz., blackbirds (Turdus merula), thrushes (Turdus musicus), starlings (Sturnus vulgaris), redpoles (Linota rufescens), of each one hundred; hedge-sparrows (Accentor modularis), 150; linnets (Linota cannabina), 140; goldfinches (Fringilla carduelis), 160; yellow-hammers (Emberiza citrinella), 170; and, lastly, partridges (Perdix cinerea), 110. When the birds arrive in New Zealand they will be let fly under proper authority. There is, we understand, a heavy penalty enforced against shooting at or injuring these birds in New Zealand, and it is hoped that they will do well at the Antipodes. The New Zealand farmers cannot get on without them, for they keep down the insects that ravage the crops. The Acclimatisation Society of Canterbury, New Zealand, we understand, have begun and are now persevering in this good public work. —(*Nature.*)

HARDWICKE HOUSE,

THE SEAT OF LADY CULLUM.

This pretty place is little more than a mile from Bury St. Edmunds. It is said to have been named "Herdwicke" from the flocks and herds which pastured on the heath or common, which, till within about fifty years since, almost ran up to the present mansion. A charter of King Edmund in 945 granted it to the Cellarer of the Monastery of St. Edmund's Bury. But of the Hardwicke of those olden times little is known; but the Hardwicke of to-day, with its numerous plantations and well-furnished parks, pleasure grounds, and gardens, may be said to have been the creation of the last fifty years.

The place has been in the Cullum family for nearly two

hundred years. Its history can readily be traced from the time of the dissolution of the monastery. It was then granted to Sir Thomas Darcy. During the reign of Queen Elizabeth it came into the possession of Sir Robert Bouthwell, Master of the Rolls. In 1610 it was purchased by Sir Robert Drury of Hawstead Place, where the family of the Drurys had resided for 250 years, and became extinct in the person of Sir Robert Drury, the purchaser of Hardwicke. The moat is nearly all that remains of this ancient seat of the Drurys, now the property of the Cullums. The way up to the place is still through an ancient and very lofty avenue of Limes, and there are three of the most magnificent Oriental Planes in the kingdom growing near to the old house, that are said to have been part of the first batch brought to England by Lord Bacon, and to be of the same age as others to be found at Gorhambury, St. Albans, Herts.

The second proprietor of Hardwicke of the Cullum family, Sir Dudley Cullum, was devoted to horticulture. He was fond of botanical pursuits, and was advised by Evelyn as to the collections, culture, and planting of rare exotics. He also adopted Evelyn's stove for the preservation of exotics, the excellence of which consisted in admitting fresh air into the greenhouse in winter, and in managing that air in such a manner as to keep up the fire to any degree of heat—a contrivance, says Sir Dudley, "that has more perfection than ever yet art was before master of, and which had highly obliged him and all lovers of this hortulane curiosity and recreation." Sir Dudley introduced into his garden at Hawstead Place, a situation well adapted for the purpose, most of the curious exotics then known in England. In 1694 Sir Dudley writes of his Orange trees as thriving in the most luxuriant manner. His greenhouse was 58 feet long, 14 feet wide, and 20 high, a large house for that time; and of its success he gave Mr. Evelyn an account that may be found in vol. xviii. of the "Philosophical Transactions."

Leaping over many years we arrive at the third Sir John Cullum, the author of the "History and Antiquities of Hawstead," and uncle of the late proprietor, Sir Thomas Gery Cullum. The two fine Cedars of Lebanon in the garden, only one of which is now standing, were planted in 1760. A very fine specimen of the Upright Cypress against the conservatory is probably of the same date.

The uncertainty and irregularity of the climate was carefully noted and recorded by Sir John Cullum. Here are a few facts of historical interest to horticulturists:—

DIFFERENCES IN DAYS IN THE FLOWERING OF DIFFERENT PLANTS IN THE YEARS 1779 and 1784.

				Difference in days.
Apricots	20th February, 1779	15th April, 1784		54
Wood Anemones..	9th March	„	16th April „	38
Apple	6th April	„	15th May „	39
White Thorn	15th April	„	22nd May „	37
Vine	14th June	„	23rd June „	9
Lime Tree	21st June	„	7th July „	16

The author remarks that the time was early in 1784, it being seldom in flower till near the end of June. He attributes this to the warmth of the preceding May. The greatest differences are in the early part of the spring.

Notwithstanding the love of planting, botany, and natural history that distinguished Sir John Cullum and his father, the Hardwicke of sixty years ago was as different as could well be to that of to-day. The late proprietor was said to have built the present house, and to have formed the present garden. Even less than thirty years ago Hardwicke was a quaint old place with its lawn, mixed garden, and Holly and other hedges, its large orchard and kitchen garden close to the house in the style common to Elizabethan mansions. About that time a new kitchen garden was formed quite away from the mansion, this old one swept away, and the present extensive flower garden laid out on its site. During his whole life, too, the late Sir Thomas Cullum was a zealous and skilful planter. He planted the park, pleasure grounds, lawns, and shrubberies; all the fine Cedars in the lawn and park were of his planting. He pushed back the arable land further and further year by year to make room for belts, park, and woods, and only finished planting when he died. He was fond of moving large trees, and was most successful in doing so at a time when the science and practice of transplantation were very imperfectly understood. He was almost as devoted to exotic as hardy plants, and the present range of glass, 300 yards in one range and other houses, were erected and furnished by him. He died twenty years ago; and his widow, the present Lady Cullum, has not only kept-up but very much enlarged and improved Hardwicke. Mr. Fish was engaged before the death of Sir Thomas, and arrived at Hardwicke a few weeks afterwards.

I will now proceed to describe Hardwicke as it is at present, but any description that can be given must fail to do it justice. The range of hothouses are very extensive, and fruits, flowers, and plants are well cultivated. The kitchen and fruit gardens are admirably managed, but the main attraction are the grounds, which are, and will be even more so in the future, a standing monument to the talents of Mr. Fish as a landscape gardener. I will therefore try to describe the grounds first. Commencing at the extreme west end of the flower garden, we follow a walk overhung with English Yews, which affords a cool and graceful promenade in summer. On the left-hand side of this walk is the Rose garden and herbaceous border. Let us step on to the velvety turf on which the Rose beds have been cut out. The position has been well selected—sheltered on the east side by the Yew walk, and on the south-west, from whence come the strongest gales of wind, by a belt of trees and shrubs, the latter forming a dense foreground, although they do not come out quite to the short grass, as winding round in front of them is the herbaceous border. The Rose beds are of a plain description—circles, ovals, and one or two irregularly-shaped beds. A geometrical garden would be out of place here. One thousand standard Roses have been used in planting the beds, but Mr. Fish informed me that Roses are not long-lived here, although, from the healthy growth made last season, they do fairly well for a time. There would be a heavy bill for Roses every three years did Mr. Fish not work a quantity annually in reserve grounds. Some of the best views of the surrounding country are obtained from this point. To the south-west, Ickworth, the seat of the Marquis of Bristol, is spread out, and a fine view is also to be obtained of Westling; indeed, the beautiful views of the surrounding country and of notable places constitute one of the charms of Hardwicke.

Following the Yew walk we reach the pinetum; but before entering this we cast our eyes down a splendid avenue of Lime trees, and one can but stand and admire the long unbroken view, extending as far as the old Abbey gates at Bury. The pinetum contains some noble examples of the choicest Coniferæ, and this class of tree succeeds splendidly at Hardwicke. Perhaps there is not such another large well-grown specimen of Pinus macrocarpa to be found in Britain. There are also grand specimens of P. excelsa and P. Sabiniana. The following are also fine:—Taxodium sempervirens, Picea pinsapo, Cedrus atlantica, and C. robusta. This is a very distinct and handsome tree. It resembles and may be a form of C. Deodara, but the branches have a more weeping character; the leaves are also longer and more glaucous.

Following a curving path through the pinetum we come to another of the distinctive features of Hardwicke, and this is the rock, root, or stump garden. The mounds and banks of earth have been formed at a vast expenditure of time, talent, and cash. If I had not been assured by Mr. Fish that it was not so, I should have thought that he had taken advantage of the natural irregularities of the ground. But it is during the spring months that this fairy spot must look its fairest and best, when thousands of Snowdrops peep out of every nook, while myriads of modest Violets scent the air, and Mr. Fish's favourite Myosotis dissitiflora, "the earliest of the year," adds its quota to the picture. In summer hundreds of luxuriant Ferns irresistibly remind one of the lines—

> "The calm retreat, the silent shade,
> With prayer and praise agree."

Leaving the rock garden by a hidden path you come upon a handsome Araucaria imbricata, a grand Wellingtonia gigantea, and yet another very large Abies Smithiana or Morinda. Behind the Wellingtonia is Abies Douglasii, probably over 100 feet in height. Not far from the rock garden is the kitchen garden, which we will come back to after finishing the dressed grounds, of which the Rhododendron grounds are the last; but before entering them, and in keeping with the surroundings, there are large spaces planted with Daffodils. When in flower they have been described by Mr. Fish as waving seas of Daffodils. There are some handsome specimens of trees and shrubs in the American garden, a striking specimen of the pyramidal Oak, grand English Yews, which are quite at home in the neighbourhood of Bury. Numerous vistas have been opened out by Mr. Fish through the plantations; and one seen from this point the largest and best, extending right over Bury, is appropriately named Vista Major.

The geometrical flower garden, of which the accompanying

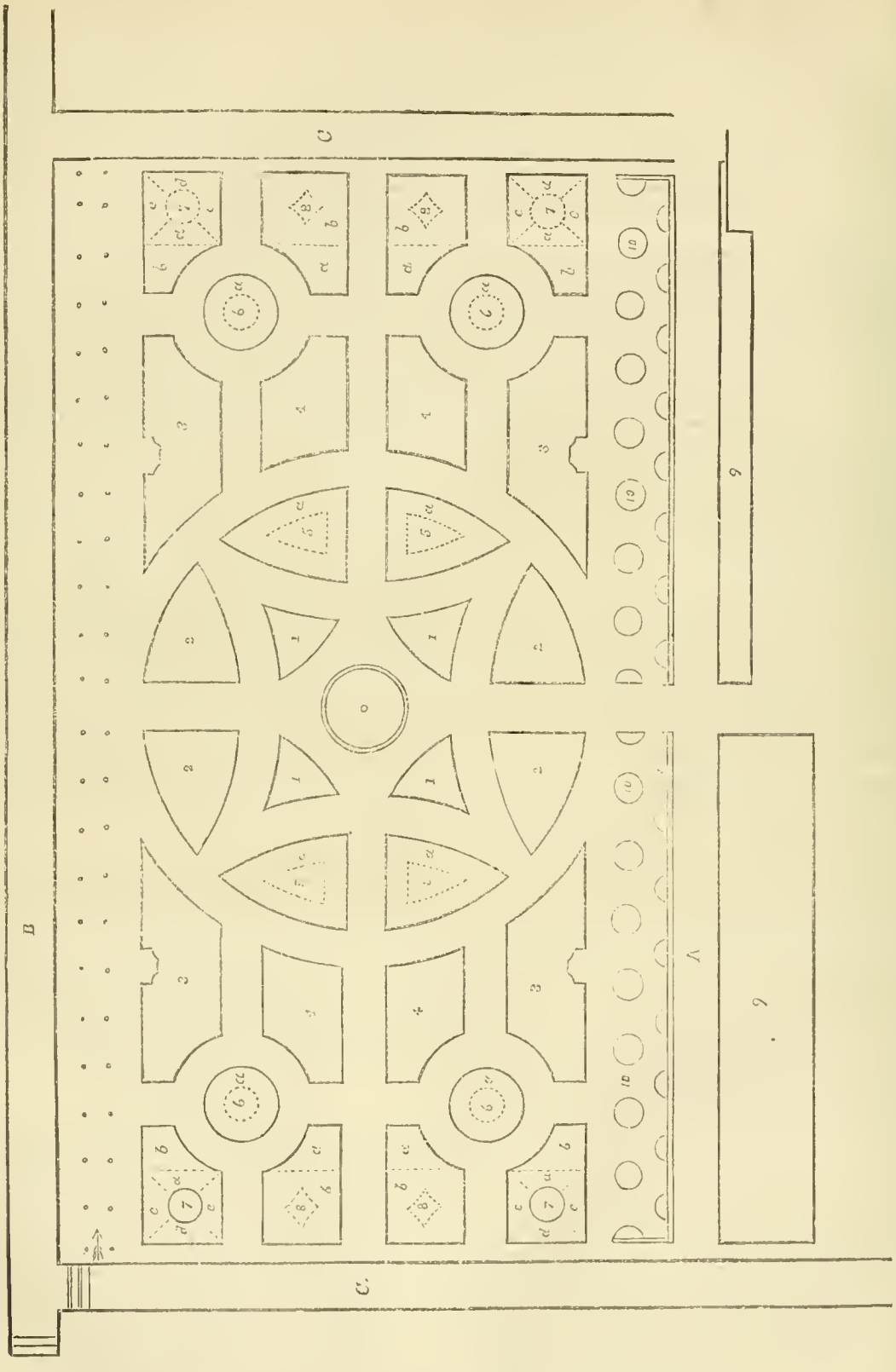


Fig. 12.—Plan of flower garden at Hardwicke House.

illustration (fig. 14) gives a good idea, adjoins the mansion. The view is taken from the walk in front of the conservatory. The large tree forming the background is a grand Wych Elm, and the smaller tree is a healthy specimen of the same; these are on the east side of the garden at the west side, but not included in the picture are some remarkable trees, and amongst them a Dutch Medlar. What! a Medlar in a flower garden? Yes, and one of the most remarkable in existence; the spread of the branches, which sweep the ground all round, have a circumference of 125 feet; a Copper Beech girths at 3 feet from the ground 15 feet 6 inches, with a circumference of branches of 207 feet; a Cedar of Lebanon girths round its massive trunk 20 feet, with a circumference of branches 270 feet; and an Evergreen Oak, the finest I have ever seen, has a circumference of its outer branches of 157 feet.

From a raised platform behind the long range of glass houses the whole extent of the flower garden is taken in at one view, and not only can one contemplate the floral beauty spread out beneath, but extensive views are obtained of the surrounding country, including four churches—viz., the tall spire of the beautiful church of St. John's, Bury; Ingham, of which the Rev. Mr. Chere had charge; Bradfield, and Rushbrook. Some handsome specimens of the English and Irish Yews are planted as isolated specimens in the flower garden, the English forming the best pyramids. No flower garden of considerable pretensions is passably praiseworthy without broad well-kept paths. The main walk here is at the outer side of the garden, and is 810 feet long by 14 feet wide; shorter walks of the same width run into this at each end of the garden. Roses are the favourite flowers at Hardwicke, so that a conspicuous place has

Fig. 14.—Geometrical flower garden at hardwicke house.

been found for them in the flower garden. The best of the Teas are planted against low walls, and inside the long walk a strong double trellis of wrought iron has been erected in the form of arches, which form a delightful promenade underneath, and can be used in hot dry weather, when walking on gravel paths is rendered unpleasant. A corresponding walk runs along the side of the garden nearest the houses, and more trellised Roses in single file. But I must close my description of this part of Hardwicke, reserving the houses and kitchen garden for another paper.—J. Douglas.

REFERENCE TO PLAN (FIG. 13).

1. Stella Pelargonium, edged with Ceraetium tomentosum.
2. Mangles' and Verbena venosa, edged with Golden Pyrethrum.
3. Chinese Roses and Amy Hogg, edged with Cerastium.
4. Dwarf Ageratum, edged with Ivy Pelargonium Duke of Edinburgh.
5. Single White Chrysanthemum. *5a.* Ribboned.
6. Raised beds supported by wooden piles. *6a.* Ribboned with Lady Cullum Pelargonium, dark Heliotrope, scarlet and Ivy-leaved Geraniums; the wooden piles densely draped with Lonicera aureo-reticulata.
7. White Perfection Pelargonium. *7a.* Cleopatra Pelargonium. *7b.* Lady Cullum. *7c.* Vesuvius Pelargonium. *7d.* Culford Pink Pelargonium. *7e.* Glow Pelargonium. Edging, Lobelia compacta.
8. Cybister Pelargonium. *8a.* Flower of Spring mixed with Lobelia speciosa. *8b.* Calceolaria Aurea floribunda. Edging, Cerastium tomentosum.

9, 9. Ribbon borders.

10. Round beds used as trial beds for new Pelargoniums.

A. Terrace walk, 286 feet long, 14 feet wide.

B. Long terrace with ornamental stone seats at each end, 810 feet long, 14 feet wide.

C. Gravel walks 14 feet wide at each end of flower garden. Centre circle is a fountain.

CONTENTS OF SMALL RIBBON BORDER.

Sedum glaucum.
Echeveria secunda glauca and Mesembryanthemum cordifolium variegatum.
Lobelia pumila flore-pleno.
L'Elegante Pelargonium.
Iresine Lindeni.
Flower of Spring Pelargonium.
Vesuvius Pelargonium.

CONTENTS OF LARGE RIBBON BORDER.

Sedum glaucum.
Echeveria secunda glauca and Mesembryanthemum cordifolium variegatum.
Lobelia compacta.
Lady Cullum.
Iresine Lindeni.
Imperial Dwarf Ageratum.
Crystal Palace Gem Pelargonium.
Spread Eagle Pelargonium.
Flower of Spring Pelargonium.
Perilla nankinensis laciniatus.
Cleopatra Pelargonium.
Cybister Pelargonium.
Dwarf white Dahlias.

NOTES ON VILLA AND SUBURBAN GARDENING.

Although the weather will very much influence operations in the garden this month, yet, whenever the opportunity occurs, the soil that has been trenched-up, say in November, for the purpose of carrying a crop of Onions, Parsnips, Carrots, and other root crops, such as Beetroot, Salsafy, &c., and more particularly if it has become firm on the surface, should immediately be turned up one spit deep, and left in a rough state to be further acted upon by the weather. There is such a material difference in the working of a soil that has been well prepared

and one that has not, but only been allowed to lie till the time for cropping comes and then dug up, and such an important influence has it in starting a crop on its season of growth, that it is necessary to make this special remark upon it. And again, the ease with which a soil can be worked reduces the labour of cropping fully one-half; and the seeds when deposited in it have a much better chance of vegetating with something like regularity, and the seedsman would escape the chance of being blamed for sending bad seeds. This working of the soil applies to every part of the garden, though, with the exception of flower beds and borders, it cannot be worked-up so deeply among shrubs and trees owing to the injury it would cause to the roots; but still the time has come when it is necessary for it to be done, as well for the benefit of the soil and the things growing in it, as it is for a neat and fresh appearance which it gives to the garden.

While talking of soil, it is just the time of year to prepare and place under cover the different sorts of soil likely to be required for potting and other purposes during the coming season. For instance, it is my custom at this time to mix up the soil for potting bedding plants, frequently turning it over until required for use, and then the work can be done expeditiously. The other soils, if laid up separately and in the dry as they ought to be, can easily be worked-up when wanted.

This reminds me that all the common sorts of bedding Geraniums, from Mrs. Pollock to Tom Thumb, that have been stored away as old plants thickly in boxes or pots, ought now to be brought out and placed in the frames or on the greenhouse shelves to induce them to break into growth. First of all the stems ought to be cut down to where there is life and health; and when they show signs of growing they should be divided and potted separately, and grown-on until they have established themselves. But when they are first cut down and until they break into growth very little water should be given to them, or the chances are, that instead of growing they will decay and die.

Again. It will be as well to see to the stock of plants that are intended to supply cuttings for propagation, such as Verbenas of sorts, Lobelias, Heliotropes, Fuchsias, and other things of which a greater stock is wanted, and place them in heat as soon as room can be made for them. It must be borne in mind, that if there is no convenience for propagation in the house it will be necessary to make up a bed for them. This may consist of a moderate beating bed of dung and leaves, and when quite ready cover the surface with old tan, ashes, or sawdust, or in the absence of these things a very light dry soil will answer; the object being to let the heat pass up through it readily, the pots to be plunged up to the rims when the bed is in a fit state and free from steam, which if allowed to prevail will cause many of the cuttings to go off.

Those who force bulbs or have the means of bringing them on in the greenhouse or conservatory should now introduce a few more pots of such as Tulips, Hyacinths, Narcissi, Jonquils, Lily of the Valley, Solomon's Seal, &c. First of all ascertain that the bulbs are firm in the soil and the drainage quite clear. It often happens that when the pot is small and the soil light the vigorous roots of the Hyacinth, from growing so fast in a cramped space, push the bulb almost out of the soil. Now, to make it again firm requires care. The roots are brittle and easily break. Instead of pushing the bulb into the soil it would be better to make it firm by adding soil to the top, or repot it into a larger one.

The pretty and useful forcing plant, Dielytra spectabilis, may be introduced into the greenhouse. It needs but a very mild heat to bring it into bloom; and although it may be grown into a very large specimen if the roots are maintained in a healthy state and the crowns formed of a good size, yet it is particularly handsome and attractive when grown in small pots for room or vase decoration. If Cinerarias are required larger the plants ought to be shifted at once, and let that be the last one; but if they are needed more for bloom small plants will be the most serviceable. And the same may be said of greenhouse Pelargoniums. Large plants for specimens need plenty of room and frequently turning about to get shapeable plants, so much so that they ought almost to have a house to themselves, as the staking and tying of the shoots is a frequent and necessary operation. Bring an old plant of each sort of Fuchsias into the warm part of the greenhouse in order to produce cuttings for plants for autumn blooming; and the stock of herbaceous Calceolarias should be examined, and those strong and healthy be shifted into larger pots. These plants should never be allowed to become pot-bound while they are increasing in size. It is, moreover, a plant very liable to throw its roots out on the surface of the soil; this peculiarity is partly encouraged by the large leaves, which generally lie flat upon the soil. These roots must be encouraged by top-dressings, especially when the plants are throwing up their flower stems.—T. Record.

DOINGS OF THE LAST AND PRESENT WEEKS.

KITCHEN GARDEN.

Allusion was made a week or two ago to forcing Sea-kale in pots. It is the best way to dig up the whole stock of roots, selecting all the large roots to pot, reserving all under a certain size to plant out as soon as convenient. Just as the crowns are starting is as good a time as any to plant them. Care must be taken not to get into the same muddle as we did this year. The plunging material used is generally cocoa-nut fibre refuse; any fermenting will in all probability cause the roots to rot, and the crowns will not start at all. In our case some decaying stable manure that had been used for another purpose was placed too close to the pots; this injured the roots, and our first crop was spoiled. The same result has happened when water has been applied to the pots after they were put into heat. The best way is to use sandy loam moderately moist when potting, and not to water the roots at all. It has been stated already that the pots are plunged out of doors, but in wet cold districts it may be desirable to throw some protection over them to ward off the rains.

Just a word also about forcing Asparagus. Our own experience would lead us to recommend heated pits, and the method of forcing in such structures was explained some weeks ago. Not everyone can command them, though, and perhaps hotbeds are more frequently used for this purpose; but more than once have we seen the roots damaged and the consequent failure of the crop from overheating. The bed should be formed of leaves and manure in equal proportions. The manure should not be fresh from the stable, but should be thrown in a heap for two weeks, and turned once or twice. In a week or so after the bed has been made-up it will be ready for the frame and lights, and when the heat has declined sufficiently the soil may be put in, and the roots planted thickly. We have made-up excellent beds with equal proportions of stable manure and coarse grass forked out of marsh land; the bottom heat from this was also very lasting. The roots ought not to be watered until the crowns are fairly started, and then it must be done carefully.

Many persons recommend autumn sowing for Peas. In some districts it answers very well. The crops sown in November have been earlier and equally good as regards crop with those sown in favourable weather in January. The experience gained in this neighbourhood is all in favour of spring sowing. The market gardeners, who must understand "cost and come to," sow in January and February for the first crop; but at whatever time the seed is deposited in the ground, much of success or failure is owing to the condition of the seed bed at the time. The ground ought not to be worked when it is wet if it is intended for any early crop. It is also quite necessary to watch for a favourable opportunity to sow the seeds. Our first crop was sown to-day (15th); the ground was in good order, and the day fine. Ample trial has been made of the best early Peas; and as we think two early varieties quite sufficient for our purpose, the selection has fallen upon Alpha and William I., both raised by Mr. Thomas Laxton of Stamford.

All the kitchen-garden ground is in excellent order for digging and trenching, and no time must be lost in getting it forwarded. We have finished the pruning, and will soon get through with tying and nailing.

FRUIT AND FORCING HOUSES.

Pineries.—We have a house of Queens, which were suckers in August; if the late autumn months had not been so mild, which made us keep the plants growing later than usual, we should like to have started them at once. Most of the plants are in 10-inch pots, which are well filled with roots. Our only difficulty is, that they have not rested enough, and when such is the case a large proportion of the plants commence to grow instead of throwing-up fruit. When a batch of good suckers can be taken off and potted in June, it is then easy to have a batch of plants ready for starting on New Year's-day. A large number will show fruit at once, others will start into growth and throw-up at intervals, which will be all the better, as a succession of fruit is thus obtained. Smooth-leaved Cayennes and Charlotte Rothschild are now usually grown for winter; but those who prefer flavour to size and appearance, will have a goodly proportion of Black Jamaica. The Queen is by far the best to start now, and the earliest fruit will be ripe in June. The stronger-growing sorts should not be grown with Queens, nor should the plants be quickened into active growth before the middle of February. Cayennes generally throw-up freely, while the more luxuriant Charlotte Rothschild will most likely start into growth. Many persons have recommended the cutting-over of the plants at the surface of the pot; this causes them to throw-up sometimes, but not invariably. We have cut over strong plants and potted them, to find that they did not fruit earlier than suckers put in at the same time. A house started now, or that was started on the first day of the year, should have a minimum temperature kept up of not less than 65°, bottom heat 90°. When the days are cloudy, as they are eleven out of every twelve, the temperature of the houses does not rise much higher by day than it does at night; the hot-water pipes must be kept about the same degree of heat, and a little air admitted from 9 A.M. to 3 P.M.

Orange Trees.—There are few gardens where the culture of dessert Oranges is practised to any extent; but the trees occupy very little room—indeed small plants in 6 and 8-inch pots, not

more than a foot or 18 inches in height, will bear as good fruit as old trees in tubs or planted-out. The fruit is very much superior to that imported from St. Michael's, and there is very great interest and pleasure in watching the development of the fruit from the flowering stage until it is quite ripe. The fruit when cut with the leaves has also a satisfactory appearance on the dessert table. The usual varieties of Oranges grown for the flowers are composed of thick skins, and a pithy substance inside; but we have the St. Michael's and Maltese Blood Oranges with the skins burst, through being too full. The fruit can also be had through the three winter months, when Grapes are scarce and the best Pears are over. Our earliest plants are now well advanced in flower, and the temperature of the house is about 60°.

Fig trees, where the buds are not started, are syringed every day; after the buds start the trees are only syringed on clear days. All ours are grown in pots, and they are repotted every year, as, if we only surface-dress them, the greatest difficulty is to know when the roots require water, as the rich surface always appears moist even when the roots are parched.

PEACH HOUSE.

The same treatment is requisite in this house as to dressing the branches and surfacing the borders as has been already detailed in the previous numbers for vineries. Watering is also the same; the only difference is, that Peaches will not bear forcing to the same extent that Vines will, especially early in the year. If the trees are in flower this month the greatest care is necessary to prevent the fruit from dropping off. The most frequent cause of this is overdryness at the roots or too much moisture in the atmosphere. The only moisture that is permitted at this time is obtained from sprinkling the paths and borders with water from a fine rose.

PLANT STOVE.

We do not approve of potting any plants that are not free growers before the middle of February, but some Ferns and foliage plants that are growing freely will be shifted into larger pots as soon as convenient. These have the pots in which they are growing quite full of roots. It is necessary to pot carefully at all seasons, but much more so at present. The pots are quite clean; the drainage is also free from any loose mould, and some fibrous material is sifted from the loam, to prevent the compost from mixing with the drainage. With a pointed stick we carefully disentangle the roots that are matted round the ball, and when the plant is placed in the centre of the pot the top of the ball should be about 1 inch below the rim. Orchids in the cool house require attention. Many of the Odontoglossums require repotting. The best time to do this is just as the young growths are starting. O. crispum, O. triumphans, O. odoratum, and other allied species require water all through the winter months; we never at any time allow them to be quite dry, so that they start at any time, and the best treatment is to repot when they require it. Quite a different course of treatment is necessary for the Mexican species. They do much better if allowed to become quite dry at the roots during the winter season, and only giving sufficient water to prevent the pseudobulbs from shrivelling. We have repeatedly counselled small shifts for all tender plants, but more especially for Orchids that require large supplies of water. All the New Grenadan species succeed best if sphagnum moss is kept growing on the surface of the pots; a large supply of atmospheric moisture is also essential to complete success.—J. Douglas.

PROVINCIAL HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

TRADE CATALOGUES RECEIVED.

William Paul, Waltham Cross, London, N.—*Select Catalogue of Seeds.*

T. Bunyard & Sons, Maidstone.—*Catalogue of Vegetable, Flower, and other Seeds.*

Barr & Sugden, 12, King Street, Covent Garden.—*Descriptive Spring Catalogue of Choice Seeds.*

W. Cutbush & Son, Nurseries, Highgate, London.—*Vegetable and Flower Seeds, Azaleas, and other Shrubs, &c.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Caraway Pippin (*A. Cheese*).—We believe it is a synonym of Caraway Russet. It can be obtained at any of the nurseries where fruit trees are specialities.

Glasgow Royal Botanic Garden (*B. G. G.*).—You have no just ground for complaint, and there is no question as to the legality of the treatment.

Apples and Strawberries for Light Soil (*Country*).—*Apples*—Lord Suffield, Rymer, Alfriston, Bedfordshire Foundling, Cox's Pomona, Warner's King, Blenheim Pippin, Dumelow's Seedling, Winter Majetiug, Norfolk Bearer, and Annie Elizabeth. We add for dessert—Red Astrachan, Cox's Orange Pippin, Reinette du Canada, Dutch Mignonne, King of the Pippins, and Scarlet Nonpareil. The first-named dozen are culinary kinds. All are good growers and free bearers. *Strawberries*—Sir Joseph Paxton and President.

Eucharis amazonica not Flowering (*J. C.*).—Your plants do not flower because they are kept constantly growing. They will now or soon be either throwing-up for flower or growing, or both. If they do not show for flower shift into larger pots, and encourage growth with a plentiful supply of water and moisture, and continue this treatment until the growth is complete, then cease watering so freely, only giving enough to keep from flagging, affording them a light airy position. After six to eight weeks of this resting process they will most likely, upon water and moisture being given, throw-up for flower, flowering in early summer; and after this they are to be encouraged with heat, moisture, and water to make a good growth; and after and in October up to about the new year, he kept dry and comparatively cool, and yet not so dry as to allow the leaves to flag. By the new year they will be throwing-up their flowers, and after it they should be potted, divided if stock is wanted, and grown on. Your treatment seems to be good, only you do not rest the plants.

Cinerarias and Calceolarias Suddenly Failing (*Jas. H.*).—The dying-off of these plants is not due to any grub or insect, but is usually a consequence of plants being irregularly watered, and allowing them to become pot-bound before shifting into larger pots, also watering upon the neck or collar of the plants. The fertile source of the evil is keeping in a dry atmosphere and warm, they delighting in a cool and moist one, but well ventilated and safe from frost. It is common to these plants and also to Humea elegans. The only culture we have found guarding against it is never allowing the plants to become dry, shifting into larger pots as those they are in fill with roots, keeping the neck or collar of the plants slightly raised in the centre of the pots so that the water will drain from, not to it, but covering the roots with soil without burying the neck or stem of the plants, and not watering upon the neck or centres of the plants, keeping moist, cool, or if warm having corresponding moisture, and good ventilation. Avoid making the soil sodden by too frequent watering, giving it when it is wanted—not before, but before the plants flag, and a thorough supply sufficient to show itself at the drainage.

Lime Water for Worms in Pots (*Idem*).—Lime water is not injurious to the roots of plants unless it be applied in too powerful doses. One pound of fresh lime is a sufficient quantity for three gallons of water, in which the lime should be put, stirred-up well, and let stand for two or three days, and then pour-off the clear water, leaving the lime sediment in the bottom, watering the plants with the clear lime water. We recommend the Vines after pruning to be stripped of any loose portions of bark, but not paring and scraping them, and then wash with a brush with clear water at a temperature of 120°, and after dress them with a composition of 1 lb. soft soap to a gallon of tobacco juice, with sufficient flowers of sulphur to bring it to the consistency of thin paint, and apply with a brush to the rods and every part, taking care not to dislocate or rub-off the eyes.

Mistletoe Cultivation (*W. W.*).—It is not a "fungus," nor a "plant," if having the roots deriving support from the soil is meant. It (Viscum album), is a genuine parasite, rooting beneath the bark of the trees on which it grows, and deriving from their juices the whole of its nutriment. It thrives best on the Thorn, Apple, Lime, and is very vigorous on Poplars, but does not take so freely upon them as the Thorn, Apple, and Lime. Seeds are the readiest means of propagation, and the best months for sowing it are February and March. Make two cuts on the under side of the branch of any of those trees and down to the wood of the branch, in the form of the letter V, raise the tongue of bark made by the cuts, but without breaking it, and into these squeeze one or two of the seeds from the berries, and let the tongue back into its place, where the seeds will be held between the bark and wood of the tree, and the seed being good the seedlings will soon appear, and remain attached to the branch. The seeds will vegetate placed upon the branches on a smooth part squeezed from the berries, and to which they adhere by their glutinous pulp, but unless protected from birds it is likely they will be eaten. At the under side of the branches, and under a tongue of bark, the seeds are more likely to escape the vigilant eyes of the feathered tribes.

Sheltering Apiary (*E. L.*).—The arrangement shown in your plan will answer very well, but we are not certain that the hedge and shrubs are to the north of the proposed apiary, and will afford them shelter from that point. If it be so, well, we have no other fear; only you say it is at the bottom of the garden. We hope it is not in a hollow, and that the Berberises are not large but low, if that be the south of the hives, as if large it would interfere with the bees' flight. The evergreens next the hedge and at the sides ought not to overhang the hives, and the front south space ought certainly to have nothing higher than the flight-board within 6 feet of the hives, and not higher than 4 feet at 12 feet distance from the hives. Place the hives with the entrances southwards, allowing 6 feet between the rows of hives.

Pruning Vines (*Vitis*).—The mode of pruning shown by your sketch is right, only we think you have miscalculated the eyes. Two are ample to leave upon each shoot; but we think you have not counted one at the bottom of each shoot, and which, though not so prominent as those higher up, ought to be calculated upon to give fruit. We may be wrong, but your sketch shows the eyes to be too distant from the base of the shoots, and this will give you in a short time very long spurs, which it is desirous to avoid. You will be able to see in a short time after the eyes break, the shoots being a few inches long, which are showing fruit, and then you may disbud. One of the shoots last year ought to have been removed, for you will crowd them with shoots, having the leaves ill exposed to light and air. We should not multiply them any more. Two shoots from a spur are ample, and the spurs should not be nearer each other along the rods than 15 to 18 inches on each side.

Avoid overcropping, which you are likely to have with two shoots to a spur. It is better to allow fruit upon only one than upon both. The extra foliage will do more good than harm, only it does not cause crowding.

Succulents.—"Having a desire to see other amateur growers of succulents come forward at the exhibitions this season, Mr. Peacock has determined not to compete during the year.—J. Croucher, *Gardener to J. T. Peacock, Esq.*"

Crown Imperials and other Bulbs in Greenhouse (*W. H. S.*).—The Crown Imperials will flower in pots, they being kept in the open ground until they appear above ground, but with protection in severe weather; or you may place them in a cool, light, and airy position in the greenhouse at once, watering them as required, moderately at first, increasing the supply with the growth, top-dressing them with rich compost when they show for flower. We should have preferred planting them in the open border to growing in pots, and would do so yet, affording them a good deep sandy soil, and covering about 3 inches deep. The bulbs of the Crown Imperials ought to have been covered with an inch of soil, and been that depth from the soil over them to the rim left free to allow for top-dressing. The other bulbs should be removed to the greenhouse. Amaryllis would not be destroyed by too low potting, but they ought not to be potted deeper than with the neck of the bulbs covered with soil, the neck being left clear and just level with the rim of the pots. It is sufficient if the soil be kept moist when they are at rest, and in February or March they should have the benefit of bottom heat for a time to insure rooting and free growth. There is no book specially treating on the cultivation of bulbs; but they are treated of in the "Cottage Gardeners's Dictionary" under their several names. Your Strawberries in pots we should introduce to the greenhouse the beginning of February, placing them on shelves near the glass, and where they will have abundance of air and light.

Pruning Old Apple Trees—Fowls' Dung for Vines (*J. C. N.*).—The best time to prune old Apple trees in an orchard is in early winter so soon as all the leaves are fallen, and through the winter in mild weather up to March. Early winter pruning is preferable to late spring, therefore have them pruned at once, but only in mild weather, ceasing therefrom if severe frost prevails. Fowls' dung is a good and powerful manure, and will answer for Vines, but it must only be applied in about one-third the quantity of farmyard or stable manure, applying to the surface, and pointing-in with a fork, but not so deep as to disturb the roots.

Artificial Manure (*D. W. W.*).—Your fresh land would be best dressed with phospho guano; and being poor, 3 cwt. per acre would not be too heavy a dressing, applying it broadcast over the whole of the surface after sowing the seeds or planting the Potatoes and before covering them up.

Black Currants for Damp Situation (*Idem*).—They will succeed better than anything else; and though it does not get sun in summer more than four or five hours a-day, they would ripen, but be, of course, later than those in a warmer position. The situation would be too much shaded for Plum trees, and the Black Currants would be more likely to pay without them. The best kind of Black Currant is Lee's Prolific, and next to it Black Naples.

Pruning Evergreen and Deciduous Shrubs (*M. N. O.*).—Now in mild weather up to when they commence swelling the buds is the best time to prune deciduous shrubs; before the swelling of the buds pruning ought to be completed, and it may be done in mild weather after the leaves fall through the winter until the buds swell. Evergreen shrubs are best pruned at the close of March, or early in April when they are beginning to grow, it being best done in mild weather and showery.

House for Figs (*Horace*).—In north Kent you will not succeed with Figs in the open ground as bushes. They would, however, succeed against a south wall with protection in winter for the branches and shoots. Every way a house would be the preferable thing to have, keeping the bushes in pots, increasing the size of the pots with the growth of the trees, and having the pots half plunged in the borders. Ultimately your two dozen bushes will require a good-sized house, as they will require to be, when they are in 14-inch to 18-inch pots, 4 feet 6 inches apart, and as much side and head-room. This will give you 52-feet length of house for two dozen trees, and 12 feet in width, having a walk up the centre 2 feet 6 inches wide, and a border on each side of the walk 4 feet 6 inches wide. The side walls may be 2 feet high above ground, and of glass 2 feet 6 inches, which will give the height of the sides 4 feet 6 inches; and in the centre over the walk the house may be 9 feet from the floor to the ridge. A span-roofed house, with the ends north and south. To make certain of two crops in a season it would be well to have the house heated by two 4-inch hot-water pipes along both sides and one end. Half the length of house would be sufficient for the trees for a couple of years.

Cherry Trees not Fruiting (*A Subscriber*).—Your soil is too light for the kind of Cherries you name, but you might do much to check their growth by making the soil firm after giving a dressing of lime to the surface, and pointing it in with a fork. A bushel of lime per rod (30¼ square yards) will be ample, and then make the soil very firm. Keep the shoots close-stopped through the summer, and manure by the surface, giving the trees a thorough watering when they are going out of flower. They will, we think, give you fruit; but if they do not in a year or two, root-prune, and make the soil about them very firm.

Substitute for Grafting Clay (*Idem*).—We do not know of any substitute for clay but grafting-wax, which is made in various ways; but we give two formulæ, one requiring to be applied warm—viz., Burgundy pitch, 1 lb.; black pitch, 4 ozs.; yellow wax, 2 ozs.; rosin, 2ozs.; mutton suet, 2 drachms, melting in an earthenware pot over a slow fire, and applied warm to the grafted part, but not so hot as to injure the bark of the stock and scion it comes into contact with. The following may be used cold:—Yellow wax, 1 lb.; turpentine, 1 lb.; Burgundy pitch, 8 ozs.; mutton suet, 4 ozs. Melt all together and mix thoroughly, leaving to cool, when the mass may be formed into small balls and used as required.

Iron Filings for Jointing Hot-water Pipes (*S. H. W.*).—Mix the filings with strong vinegar, making thoroughly moist, forming a sort of salve; or add sal ammoniac 1 oz. to 2½ lbs. of the iron filings, and half an ounce of flowers of sulphur. In either case the piping should not be used until the iron cement has become perfectly firm.

Apricot, Cherry, and Plum Trees Pruning (*A Constant Reader*).—The fruit of these is produced upon spurs principally, and the young shoots also fruit; but after the first year of the young shoots you will have to rely upon spurs for fruit of the Cherry and Plum, and mainly upon spurs of the Apricot, though the young shoots of the Apricot will fruit freely, and should be laid-in between the main branches, but not so as to crowd them. They may be laid-in 3 or 4 inches apart. The main branches or shoots ought for all the trees named to be 1-foot distance apart, and trained fan-shape; each shoot or branch intended to produce spurs be taken straight, and at such an angle that, when it is half the length it has to traverse, it will be 1 foot distant from the branch it originates. The long shoots we should not shorten, they being intended for branches, and the trees are properly furnished. If the trees are not furnished the shoots must be cut back to give you the requisite shoots, otherwise we should not shorten them, but train-in their full length. The side shoots of the Cherry and Plum should be cut-in to about an inch, or two eyes of their base, and the twiggy side shoots of the Apricots laid-in between the main branches, and not shortened; but any fore-right or front shoots are to be cut-in to two eyes. Any short stubby shoots of not more than an inch or so long should not be shortened, but left their full length; they are spurs, and will be clusters of fruit buds, with a wood bud at their points. We should not advise the lifting Peach and Nectarine trees which are now fruiting, although producing vigorous shoots 6 feet long. Leave well alone; only remove their points, say a third, the length of the shoots, and train-in from them bearing shoots at 1-foot distance apart.

Decayed Sawdust for Flower Beds (*J. K.*).—If reduced to "mould" it will answer well; but if it contains any woody matter, be likely to engender fungus, and in this case would be objectionable as a top-dressing.

Berberidopsis corallina for Wall (*Idem*).—It is a very pretty sub-scandent shrub with coral-like red flowers, evergreen, and is suitable for a wall, but requires one with a south or south-west aspect. Lobelia speciosa will suit as an edging to yellow Pansy.

Transplanting Rose Trees (*Bereaved*).—Take them up as soon as you can, and carefully preserving as much root as practicable; and as they are taken up cover the roots with mats to protect them from drying, and carefully pack the roots in dry straw, and secure with mats outside. They should have the heads neatly tied together—the plants, in fact, secured by mats in reasonable-sized bundles, and they should be carefully planted, the ground having been trenched and liberally manured. Pruning should be deferred until the beginning of March. Secure them against winds by suitable stakes and tying, watering at planting if the weather be dry, and in dry weather after growth syringing or watering overhead in the evening, so as to secure free growth. They should be pruned rather more severely than had they not been removed.

Names of Fruits (*Pierson*).—The Pear is Beurré Rance.

Names of Plants (*J. A.*).—It is impossible to identify plants from foliage only, it takes much time to do so even when flowers are with the leaves.

POULTRY, BEE, AND PIGEON CHRONICLE.

POULTRY EXPERIENCES IN 1874.

It may not be uninteresting to the readers of your Journal to hear the year's experiences of a poultry-keeper on a very small scale, and it may also be the means of encouraging others to attempt what is certainly a profitable as well as an amusing occupation. I have had built at the end of a long narrow kitchen garden a small poultry shed, which is entirely roofed-in, and a roosting and laying-house made according to the directions of the "Practical Poultry-Keeper." The yard is about 16 by 14 feet, and the house about 6 feet square, and in this space I have kept a cock and from eight to ten hens, and reared twenty-two chickens. The sort I keep are Light Brahmas, which I have found exceedingly satisfactory in every respect, being very hardy, and constant layers. I have had in the year 996 eggs, with five hens on an average laying at the same time, and the following is my table of profit and loss:—Expenses during the year for food and carpenter's work to the shed, &c., £7. Receipts, including value of stock, £11 12s., leaving a balance of £4 12s. as profit, and a supply for the table of rich eggs and first-rate chickens for eating.

I have bought the food entirely and of the very best quality, giving barleymeal and bran in the morning, wheat at night, and kitchen scraps with abundance of green food in the day. The young chickens were fed on Scotch oatmeal and bread soaked in milk mixed with fine chopped grass.

I have kept a Cochin hen and one or two Barndoor as well as Brahmas, so I have had opportunities of testing the superiority of the latter sort. I have found them far less broody than the Cochin, while they make quite as good mothers and lay a great many more eggs in the year than the Barndoor, and, while I lost two pullets of the latter sort, I reared every Brahma I had. They are also very handsome, and I was able to sell several sittings in the spring at 6*d.* an egg. I may add that I attend to them entirely myself, cleaning out the roosting house every morning, and I always let them have plenty of dry earth or lime riddlings as a dust bath, and pulverised oyster shells to peck when they like. They seem always perfectly happy though kept in close confinement.—A. H. Martin, *Evesham.*

THE BARB.

A fine Barb is a rare bird. The majority of the specimens we see are of the coarse coarsely, and with the Barb vulgarity is ruinous; for a large bird with a common wattled head (such as we see) is too suggestive of a Carrier with its beak razeed. It is a variety we would like to admire, but finding it impossible to obtain the very few fine birds met with in our travels, we have allowed the fancy for them to sleep until the present time, and nothing but an extra specimen (of our style) will induce us

to become enthusiastic in their favour. The fanciers of Barbs may be divided into two classes: one in favour of the coarse vulgar birds, of which there are many; the other favouring the small elegant birds, which are the antipodes of the Carriers, and of which there are so few. We are happy to state that the most refined fanciers are nearly all to be placed in the class advocating the small specimen. The extreme beauty of such birds is the determining cause, and a fancier who has once seen a good-headed creation of the small type will never be satisfied with a "razeed Carrier." Like all fancies for pictures, sculpture, horses, or what not, the pursuit tends to refinement and exclusion, and the man who begins with commons and common specimens is as sure to reach a higher taste for the rarest (among Pigeons) as he who tosses away chromos or plaster casts for Rembrandts or Angelos.

The reason Barbs have not heretofore caused a sensation is because they have never been properly bred. They have been kept too near the Carriers; there has not been enough distinction to make the keeping of the two varieties interesting; they have been playing second fiddles, and always will, as long as the difference in beaks is the only contrast observable to the ordinary looker-on in Pigeondom.

Few persons have devoted themselves entirely to Barb culture, and among the few we know there has been but one arrived at

Fig. 15.—The barb.

anything like success. He has produced one bird, which we shall bear in mind in giving the points we think most important to breed for. The others of our acquaintances have been contented to rear a large number of second-fiddles, resting satisfied with quantity instead of quality. We have had the pleasure of watching two fanciers, one of Carriers, the other of Barbs, and have derived much information as well as amusement from their conversations. The Carrier is striving for a long beak, just another quarter, with the head a little narrower; while the Barb says, "If I can only breed the beak a little shorter, and the head a little broader, all will be right." So they go, and neither pays attention to the bodies, and the result is two birds of nearly the same size, only distinguishable by examination of the beaks. We saw at a show a short time ago two such birds, which it would have been impossible to distinguish by merely feeling any part except the beaks.

The shape of the Barb should be different from all the other varieties. It should be small, compact, and stout in appearance, like the pug among dogs. The Almond Tumbler is small and light; the Barb should be small and stout, like a short, sturdy, broad-backed person, perfect in proportion, but proportions heavy according to size of individual—in other words, a little big Pigeon; the feet red, toes well spread and flat upon the ground; broad across the shoulders; flights and tail long. The neck rising full from the shoulders becomes thin and small at its connection with the head, presenting the appearance of the neck of the broad-headed snakes.

The head is considered the most important part, and most of the care has been bestowed upon its points; it should be broad across, and short from before backwards. The beak is short and broad at its base; it should be of the Hawk or Owl variety, set on in a line with the brow and head, thus presenting what is called a down face. Very little beak-wattle allowed, the less the better.

The eye is very important; it is pearl in all colours except the White, in which it is dark. It is surrounded by a wattle as large as that of the Carrier, and of the same soft material, feeling like velvet in the perfect birds. The wattle should be of the same width all around the eye. Most of the coarse birds are what they call pinched-eyed—that is, the cere becomes narrow at the back of the eye, and the perfect circle is incomplete. This is a fault that cannot be too carefully guarded against, and a bird with a narrower perfect cere is more valuable than a cere broad in front but pinched behind.

The colour of the Barb is black—that is the best; but Reds, Duns, Yellows, Blues, and Whites have been bred, and some of them are easier to obtain than the Black, but it is seldom they breed truly. A pair of Yellows may throw all Reds, and *vice versâ*—a great defect in any variety, as when a fancier buys birds for their colour he wants them to breed it—viz., to have the blood and not be mongrels. None of the Barbs we have owned breed truly, though the variety is one of the oldest. The Blacks are the most steadfast, that being the original colour. It will be gathered from the foregoing that the points we admire are the following:—1, Size, small; 2, Shape, stout; 3, Eye, pearl, well wattled; 4, Head, broad; 5, Beak, short and hooked; 6, Neck, thin at the setting-on of the head; 7, Colour, black.

There is a problem connected with Barbs and Carriers which we should attempt to solve if we should ever again be tempted into the wattled-bird fancy. It is, whether they have been derived from the same source? To us the question is decided in the affirmative by all the external marks of the varieties, and by our knowledge of what can be produced by the selection of specimens possessing certain points. We started to prove this side some years ago, and our experiments were satisfactory as far as they went, but were interfered with by a visit to Europe, where, from what we saw, we thoroughly convinced ourselves of the truth of the proposition.

Should we again attempt a solution of the question we should obtain a pair of barbed (wattled) Pigeons, and from their young select birds for two strains, keeping in view the long face (or beak) for a Carrier strain, and the short face (or beak) for a Barb strain, and by continuous selection and judicious matching of such individuals there would not be the slightest doubt of producing well-defined Carriers and Barbs. Patience is, of course, a necessity here as elsewhere, but it completeth a perfect work. To persons who have simply kept Pigeons such productions may seem impossible; but to those who seek knowledge beyond the limits of sight, and to those who have spent months and years in the lofts with mongrels, so shaping the course of Nature that she becomes the handmaid instead of the mistress, the production of Barbs or Carriers from the wattled Pigeons becomes as simple as the breeding Long and Short-faced Tumblers from the same strain, or the conversion of Turbits into Owls, &c.—Dr. W. P. Morgan, *Baltimore, Md.*—(*The American Pet-Stock Bulletin.*)

[The above article, like all by Dr. Morgan, is plessant reading, but the show Barbs of America must differ from those of England, the fault here being rather of getting them too Tumbler-shaped, and the longish form of the true Barb with rather long flights is being lost. It is, I hold, a mistake to breed all varieties down to weak delicate birds. I admire robustness in an English Owl, delicacy in an African Owl. Delicacy, again, is the very thing in an Almond Tumbler, but a Barb should be like a little cob, not a racing pony. Dr. Morgan's idea of being like a pug is not bad. I own I do not think that Carriers and Barbs are connected. An English authority tried the crossing of the two, and a perfect failure as to wattle was the result.

The Barb should be a little big Pigeon, like a cob horse, a resemblance I prefer to a pug, for, as the Birmingham Columbarian Society state, it should have "a rather heavy appearance," and pugs are now bred small. As Dr. Morgan's friend the Barb-fancier has only "produced one bird" up to the mark, what a pity he does not procure better birds from some of our great English breeders. But whatever American fanciers may be poor in, they are rich in a doctor-fancier. I only wish we possessed an M.D. or an M.R C.S. who, being a Pigeon-fancier, had the happy literary gifts of Dr. Morgan. Interesting writers as poultry or Pigeon writers are doubly valuable, as their articles attract the attention of non-fanciers, who, being attracted, become not unfrequently ardent fanciers; such a writer is Dr. Morgan.—Wiltshire Rector.]

BRAHMAS FOR EGG-PRODUCING.

I cannot help thinking that somebody steals a march on "Agricola," and gets first to the nest. His letter induces me to give my experience.

I bought four Brahma pullets at Stevens's on the 20th of last March. I had two eggs on that day, and 412 to November 30th. Three of them sat. I reared eighteen chickens: eight I cooked, the largest made a good Sunday's dinner for my family of eight, with 1 lb. of sausages; two the cats dined off, leaving eight pullets. My first two sittings were hatched on May 23rd. My first egg from the young birds was laid on December 5th, and I have averaged four eggs per day since. I now give two meals a-day—8 A.M., ground oats slaked with boiling water; 2 P.M., house scraps, potato peelings, &c., hot made up with whole corn mixture. I have not been one day without an egg since I commenced. I flatter myself no other breed would show better results. I do not keep a cock bird, buying what eggs I require for sitting. I must in justice add that I have kept fowls before, and gained most of my experience from our Journal.—Ealing.

WOLVERHAMPTON POULTRY SHOW.

This Show was held in the Agricultural Hall, on the 15th, 16th, and 18th inst. The awards were as follow:—

Brahmas —*Dark.—Cock.*—1, Newnham & Manby, Wolverhampton. 2 and *hc*, T. F. Ansdell, Cowley Mount. 3, J. Watts, King's Heath, Birmingham. *c*, F. J. Cotterell, Birmingham *Hen.*—1 and 2, W. H. Crabtree, Levenshulme, Manchester. 3, T. F. Ansdell. *hc*, W. Hargreaves, Bacup; F. Bennett, Shifnal; J. Walker, Newcastle. *c*, E. Pritchard, Wolverhampton; W. Birch, Barnacle; W. B. Etches, Whitchurch.

Brahmas —*Dark.—Cockerel*—1, R. P. Percival, Northenden, Manchester. 2 and 3, T. F. Ansdell. 4, E. Ryder, Hyde, Manchester. *hc*, F. Bennett. *c*, Newnham & Manby; G. E. Cartmel, Eden Mount, Kendal; W. Birch; W. B Etches. *Pullet.*—1, 2, and 4, Newnham & Manby. 3, White & Shuter. *hc*, E Pritchard. *c*, W. B. Etches; E. Pritchard; W. Birch.

Brahmas.—*Light —Cock.*—1, W. H. Crabtree. 2, T. A. Dean, Marden, Hereford. 3, J. Bloodworth, Cheltenham. *hc*, J. Birch, jun.; F. J. Cotterell. *c*, G. Walters, Worcester. *Hen.*—1, R. P. Percival. 2, W. H. Crabtree. 3, F. J. Cotterell. *hc*, T. A. Dean. *c*, G. Walters; R. Bird; G. M. Rolls, Monmouth; S Sambrooke, Chipping Campden.

Brahmas.—*Light.—Cockerel.*—1, R. Bird, Fulham, London. 2, J. Bloodworth, Cheltenham. 3, R. Horafall, Liverpool. 4, R P. Percival. *hc*, W. Storer, Brewood (3). *Pullet.*—1, H. C. While, Mancy, Sutton. 2, W. Tedd, Erdington. 3, T. A. Dean. 4, R. Bird *hc*, W H Haseler, Handsworth; Mrs. G. M. Rolls; W Tedd; C. Morris, Chester; C. Bloodworth. *c*, W. H. Haseler; R. Bird (2).

Dorkings.—*Coloured, except Silver-Grey.*—1, J. Copple, Prescot. 2 and 3, Countess of Dartmouth, Patshall, Abrighton. *hc*, W. H. Denison, Woburn Sands; Mrs. W. Chalmers, Hallyburton, Coupar Angna; J. Copple (2); Henry Lingwood, Needham Market.

Dorkings.—*Silver-Grey.*—1 and 3, W. Ruttidge, Northend, Kendal. 2, E. Wren, Lowestoft. *hc*, Mrs. H J. Bayley, Rosedale, Tenbury.

Dorkings.—*White.*—1, W. Morfitt, Goole. 2, Mrs. G. M. Rolls. 3, J. E. Pilgrim. Hinckley.

Dorkings.—*Cuckoo* —1, H. Allen, Wood Green. 2, Countess of Dartmouth. 3, W Messenger, Woncrsh, Guildford. *c*, H. Allen.

Cochin-China.—*Cinnamon and Buff.*—1, W. A. Taylor, Manchester. 2, J. Cattell, Birmingham. 3, S. R Harris, Onsgarne, St. Day. *hc*, H. Tomlinson, Birmingham. *c*, A. H. Jones, Larkhill, Liverpool.

Cochin-China.—*Cinnamon and Buff.—Cockerel.*—1, W. A. Taylor. 2, Mrs. A. Tindal, Aylesbury. 3, Henry Lingwood. *vhc*, R. P. Percival. *hc*, H. Goodfellow, Madeley, Newcastle; C. Bloodworth, Cheltenham. *c*, Mrs. H. Shutt, Stourbridge; J. T. Lees, Drayton.

Cochin-China.—*Cinnamon and Buff.—Pullet.*—1, A. Darby. 2, G. E. Cartmel. 3, Mrs. A. Tindal. *hc*, R. P. Percival; J. Cattell; W. A. Taylor. *c*, Mrs. E. Allsopp, Worcester; H. Dean.

Cochin-China.—*Brown and Partridge-feathered.*—1 and *hc*, W. A. Taylor. 2, Mrs. A Tindal. 3, T. Stretch, Ormskirk. *vhc*, E. Tudman, Whitchurch, Salop.

Cochin-China.—*Brown and Partridge-feathered. — Cockerel.* —1, Mrs. A. Tindal 2, W. A. Taylor. 3, R. P. Percival. *vhc*, T. Aspden. *hc*, E. Tudman.

Cochin-China.—*Brown and Partridge-feathered.—Pullet.*—1, R. P. Percival. 2, W. A. Taylor. 3, E. Tudman. *hc*, T. Aspden, Church; R. Jones, Neath; Mrs. A. Tindal. *c*, Mrs A. Tindal

Cochin-China.—*White*—1, C. Bloodworth. 2, R. S. S. Woodgate, Pembury, Tunbridge Wells. 3, W. Whitworth, jun., Longsight, Manchester. *hc*, T. Rogers, Walsall; S. R. Harris; W. R Bull, Newport Pagnell.

Cochin-China.—*Any other variety.*—1, W. Jehu, Bridgenorth. 2, G. Fortey, Shrewsbury. 3, A Darby, Shrewsbury. *hc*, T. Aspden *c*, H. Feast, Swansea.

Houdans.—*Cock.*—1, J. J. Scott, Llanstephan. 2, R. B. Wood, Uttoxeter. 3, W. Whitworth, jun. *vhc*, F Bennett. *hc*, G D. Harrison, Grange-over-Sands; G. Anderton, Accrington; W. Dring, Faversham. *Hen.*—1, W. Dring. 2, C. Morris. 3, W. Whitworth, jun. *hc*, G. D. Harrison; R. B. Wood (2); J. B. Rowland, Pillerton Vicarage, Warwick.

French.—*Any other variety.*—1, W. H. Crabtree. 2, Rev. G. B. Knight Biratwith Vicarage, Ripley. 3, Rev. W. J. Ridley, Newbury. *hc*, Mrs. J. Cross Brigg; F. Bennett.

Spanish.—*Cock* —1, E. Jackson, Finchfield, Wolverhampton. 2, J. Walker, Wolverhampton. 3, Mrs. E. Allsopp. *hc*, W. Smallwood, Wolverhampton; E. Jackson; J. Barry, Bristol. *Hen.*—1, Mrs. E. Allsopp. 2, J. Walker. 3, J. F. Silitoe, Wolverhamptoo.

Game.—*Black Red.—Cockerel.*—1, G. Bagnall, Stoke-on-Trent. 2, G. Newdigate, Shifnal. 3, S. Matthew, Stowmarket. *hc*, J. Mason, Worcester; A. Dyas, Madeley. *c*, J. Palmer, Wednesbury.

Game.—*Brown Red. — Cockerel.* — 1, S. Matthew. 2, T. Hassell, Market Drayton. 3, T. Burgess, Whitchurch, Salop. *hc*, W. Perrin; Miss Osborn (2); J. Forsyth; A. Dyas.

Game —*Excepting Brown and Black Reds. — Cockerel.* — 1, W. J. Cope, Barnesley. 2, J. Forsyth, Wolverhampton. 3, E. Winwood, Worcester. *hc*, J. Palmer; E. Bell. *c*, E. Bell.

Game.—*Any variety.—Cock.*—1, S. Matthew. 2, G. Lunt, Market Drayton. 3, J. Foreyth. *hc*, J. Palmer; C. Chaloner, Chesterfield. *Hen.*—1, A Cameron, Epworth. 2, S. Matthew. 3. J. P. Gardener, Rugeley. *vhc*, J. Forsyth; J. Palmer. *hc*, C. F. Barnett; Miss Osborn.

Polands —2, T. Webb, Sutton.

Hamburghs.—*Gold-spangled.* — 1, T. Blakeman, Wolverhampton. 2, H. Pickles, Earby, Skip on. 3, Duke of Sutherland. *hc*, I Davies; S. W. Hallam; W. May. *Silver-spangled.*—1 and 2, Duke of Sutherland. 3, H. Pickles. *vhc*, Ashton & Booth. *hc*, C. Parsons

Hamburghs.—*Gold-pencilled.*—1, H Pickles. 2, W. Dixon, jun., Darby. 3, S. W. Hallam, Leicester. *c*, J. Anderton. *Silver-pencilled.*—1, R. W. Bracewell, Earby, Skipton. 2, H. Pickles 3 and *hc*, Duke of Sutherland.

Bantams.—*Game.*—1, E. Bell, Burton-on-Trent. 2 and *hc*, Mrs. E. Hunter, Wolverhampton. 3, G. Roden, Wolverhampton. *Any other variety.*—1, H. B. Smith, Broughton. 2, Mrs. Wootton, Mapperley, Nottingham. 3, W. H. Shackleton, Bradford. 4, Mrs. E. Pritchard, Wolverhampton. *hc*, R. H. Ashton; Mrs. A. Tindal. *c*, Sir J. Morris; J. Bloodworth.

Any other Variety —1, W. Meanley, Handsworth, Birmingham (Black Hamburghs). 2, F. Sabin, Birmingham (Malay). 3. A. Ward. *hc*, Duke of Sutherland (Black Hamburgh); H. Yardley (Yokahamas); G Burnell (Malay); Rev. N. J. Ridley (Malay); H. Pickles (Black Hamburgh); T. Marples (Sultans) A. Ward.

Selling Class.—*Brahmas, Dorkings, and Cochins.—Cock.*—1, H. B. Morell Clyro (Dark Brahma). 2, S. Sambrooke (Buff Cochin). 3, F. J. Cotterell (Light Brahma). 4, J H. Jones, Handforth, Manchester (Partridge Cochin). *vhc*, R. P. Percival (White Cochin). *hc*, P. Ogilvie (Dark Brahma); G. F. Whitehouse (Dark Brahma); E. Pritchard (Dark Brahma); J. Pitt (Dark Brahma); W

Hargreaves; R. P. Percival (Dark Brahma); H. B. Morrell (Dark Brahma); H. Yardley (Dark Brahma); T. F. Ansdell (Dark Brahma); C. L. Boyce (Dark Brahma); T. Powner (Dark Brahma); T. Barker (Brahma); H. Chawner, jun. (Brahma); F. Bennet (Brahma); R. P. Percival (Light Brahma); E. J. Draper (Buff Cochin); H. Goodfellow (Buff Cochin); Mrs. H. Shutt (Buff Cochin); J. Cattell (Buff Cochin); F. Bennett (Buff Cochin); J. Alcock (Buff Cochin); H. Tomlinson (Buff Cochin); R. P. Percival (Partridge Cochin); G. Lamb (Partridge Cochin); J. H. Jones (Dark Brahma); J. Watts; H. Chawner, jun. (Brahma); F. J. Cotterell.

SELLING CLASS.—*Excepting Brahmas, Dorkings, or Cochins.—Cock.*—1, J. Pitt, Wolverhampton (Spanish). 2, G. Burnell, Rugeley (Black Red Game). 3, J. Walker (Spanish). 4, J. & E. Prince, Nantwich (Brown Red Game). *vhc*, C. L. Boyce (Black Hambargh); T. Boulton (Gold-spangled Bambargh); J. T. Parker (Spanish); J. Jarratt (Spanish). *hc*, Duke of Sutherland; Rev. H. Buckston (Silver-spangled Hamburgh); T. Hassell (Brown Red Game); F. A. Beck, Guilaford, Welshpool (Black Red Game); J. S. Rooth (Malay); H. C. While, Maney, Sutton.

SELLING CLASS.—*Brahmas, Dorkings, or Cochins.—Hens.*—1, R. P. Percival (Dark Brahma). 2, E. Shaw, Oswestry (Dorking). 3, E. Pritchard (Dark Brahma). 4, C. Morris (Light Brahma). *vhc*, T. Rogers (Dark Brahma); R. P. Percival (Light Brahma). *hc*, G. F. Whitehouse (Dark Brahma); H. B. Morell (Dark Brahma); Newnham & Manby (Dark Brahma); Mrs. Allsopp (Dark Brahma); H. Langman (Dark Brahma); W. Hargreaves; P. Ogilvie (Dark Brahma); H. Chawner, jun (Brahma); F. Bennett (Brahma); J. Watts (Brahma); W. H. Haseler (Light Brahma); J. Alcock (Buff Cochin); R. P. Percival (Buff and White Cochins); J. T. Lees, Drayton, Penkridge (Buff Cochins); C. Bloodworth (Buff Cochins); H. Tomlinson (Buff Cochins); J. J. Waller (Partridge Cochins).

SELLING CLASS.—*Excepting Brahmas, Dorkings or Cochins.—Hens.*—1, E Jackson (Spanish). 2, R. B. Wood (Crevè-Cœurs) 3, D. Lane, Hardwick, Gloucester (Houdans). 4, C. L. Boyce, Birmingham (Black Hamburghs). *hc*, R. Davis (Silver-spangled Hamburghs); J. Jarratt (Spanish); J. T. Parker (Spanish); W. B. Etches (Scotch Greys); J. Aldridge, jun. (Black Spanish); H. C. While.

TURKEYS.—1, W. Wykes, Wolvey, Hinckley. 2, P. Gill, Trewern, Oswestry. *hc*, Rev. N. J. Ridley; R. H. Masfen.

GEESE.—1 and 2, T. Kingsley, Tring.

DUCKS.—*Aylesbury.*—1, Mrs. Wootton. 2 and *hc*, T. Kingsley. *Rouen.*—1, —Gladstone, jun., Liverpool. 2, W. Evans, Prescot. *vhc*, W. Evans; W. Meanley. *hc*, J. Forsyth; W. B. Etches. *Any other variety.*—1, S. Burn, Whitby (Black East Indian). 2 and 3, Sir J. Morris, Wolverhampton (Pintail and Carolina). *vhc*, J. C. Smith (Brazilian); Mrs. G. M. Rolls; Mrs. H. J. Bailey (White Call). *hc*, R. Macalister (Muscovy); S. Burn (Carolina); H. B. Smith.

PIGEONS.

TUMBLERS.—1, 3, and *vhc*, H. Yardley, Birmingham. 2, J. Baker, Kew Bridge. *hc*, A. & W. H. Silvester, Sheffield.

FANTAILS.—1 and 2, E. A. Seal, Kilgobbin, Dublin. 3, H. Yardley.

CARRIERS.—1, H. Yardley. 2, J. Baker. 3, A. J. E. Swindell, Stourbridge.

DRAGOONS.—1, Rev. G. F. Hodson, North Petherton. 2, H. Yardley. 3, C. E. Chavasse, Sutton Coldfield. *hc*, F. Elkington, Wolverhampton; H. Yardley; J. Barker.

ANTWERPS.—1 and 3, W. Gamon, Chester. 2, J. F. Theobald, Lower Tooting, London. *hc*, H. Gough, Wolverhampton; E. Booth, Birmingham.

ANTWERPS.—*Working or Homing.*—1, J. J. Sparrow, Grosvenor Mews, London. 2 and *hc*, W. Ellis, Idle, Leeds. 3, W. Gamon.

NUNS.—1, R. J. Goodwin, Townsend, Stoke-on-Trent. 2, R. W. Richardson, Meaux Abbey, Beverley. 3, H. Yardley. *hc*, J. Watts; E. A. Seale.

OWLS.—1, J. Baker. 2, J. J. Sparrow. 3, H. Yardley. *hc*, J. W. Edge, Birmingham.

TURBITS.—1, S. Salter, Oxford. 2, J. Baker. 3, E. A. Seale. *hc*, W. Tedd; H. Mappleback, Birmingham; E. A. Seale.

JACOBINS.—1, E. A. Seale. 2 and 3, J. Thompson, Bingley. *vhc*, J. Baker; R. W. Richardson; W. T. Breeden.

BARBS.—1 and 3, H Yardley. 2, J. Baker.

POUTERS.—1 and 3, H. Pratt, Hampton-in-Arden. 2, H. Yardley. *hc*, Mrs. Ladd, Calne; J. Baker.

ANY OTHER VARIETY.—1, Wells & Sherwin, Ripon. 2, J. Watts. 3, W. Tedd.

SELLING CLASS.—1, H. Yardley. 2, J. Baker. 3, J. Thompson. *hc*, J. Watts; H. Yardley.

JUDGES.—Mr. R. Teebay, Fulwood, Preston; Mr. F. C. Esquilant, 4, Effra Road, Brixton, London; Mr. M. Leno, Dunstable; Mr. J. Dixon, North Park, Bradford.

FAKENHAM SHOW OF POULTRY, &c.

THE fifth annual Show of the Fakenham and West Norfolk Poultry Club was held on the 12th and 13th inst. in the Corn Hall, a building which, from the great abundance of light and its good size, is admirably adapted for the purpose of a poultry show.

The Coloured *Dorking* cocks were inferior to the hens, which included several very good birds. The cup hen was a very fine one. In Dorkings of any other variety Silver-Greys, Whites, and Cuckoos won the prizes. Buff *Cochin* cocks were a fair class; but Cochin cocks of any other colour were poor. Buffs took all the prizes amongst Cochin hens. The first Dark *Brahma* cock, which was a grand bird, succeeded in winning the Brahma cup and the champion cup for the best pen in the Show. He won his place fairly, and was a good step ahead of any others in the class. Hens were a nice class; and here Mr. Leno had to be content with a second prize, first being awarded to a beautifully-marked pullet belonging to the Rev. J. D. Peake. Both classes of Light Brahmas contained some very excellent birds, but some two or three good ones were very much out of festher. In Brown Red *Game* cocks Mr. Martin won the Prince of Wales's cup with one of his now well-known strain, a bird most excellent in colour, style, and shape. This was an excellent class. The Black Reds, although good, were by no means equal. In Game hens, Black or Brown Reds, the prizes went to some most beautiful birds of the latter variety, first besting the second chiefly in style. In Game cocks of any other colour some graud Duckwings were shown; and in hens two Duckwings and a Pile were the winners. In *Hamburghs* the cup was won by a psir of very good Golden-spangled, the best in their class. In Silvers the hens were, generally speaking, much better than the cocks; indeed, there were several pens containing good hens, but good cocks were rare. The Golden-pencilled were a fair class; and the Silver-pencilled contsiued some very nice birds. The first cock had a very nicely-marked tsil; the hen was also a good one. Blacks were about an aversge, and here the first-prize psir won the second county cnp. There were two classes for *Malays*, and amongst them were some capital specimens of both White and Coloured. *Spanish* were not numerous; the first-prize psir won the section cup. In *French* very fiue Crêves won first, La Flèche second, and Crêves again third. In the Variety class a fiue psir of Golden Polish won; second were nice Silver Polish, and third White Leghorns. The Black and Brown Red Game *Bantam* cock class contained some very nice Black Reds, and the other Coloured Game Bantam cocks contained some remarkably good Duckwings, also one or two fair Piles. Game Bantam hens were chiefly Black Reds, but a very good Brown Red was first. In Bantams of any other variety Silver-laced, Black, and White were respectively the winners. In Aylesbury and Rouen *Ducks* Rouens were first, and better than any of the others. The Variety Duck class contained a very pretty and interesting collection of various fancy Ducks. The Selling classes were numerously filled, and contained a few good and cheap birds.

In PIGEONS the first-prize Black *Carrier*, a cock, secured the section cup; he was a fine bird and in capital condition. The *Pouter* class contained a lot of excellent birds, more especially of Whites, first being a grand White, second and third capital Blues. In *Tumblers* some good birds were shown, bnt the competition was very limited. *Fantails* were fair. *Dragoons* were very good indeed, some very capitsl specimens of Blues and Yellows being the winners. The *Antwerp* class contained some few very nice birds; the first and second a Silver Dun and a Blue, being both very good in qusility. The *Jacobins* were a fair average; and in Any other variety all the prizes went to Black Barbs, and the first-prize peu won the section cup.

DORKINGS.—*Coloured.—Cock.*—1, 2, and County, Mrs. B. B. Sapwell, Norfolk. 3, J. Gee, Oxford. *Hen.*—Cup and 1, F. Parlett, Chelmsford. 2, H. Lingwood. 3, J. White, Northallerton. County and *c*, E. H. Willet, Norwich. *hc*, C. Speed, Oakham; J. Gee.

DORKINGS.—*Any other variety.*—1, L. Wren, Lowestoft. 2, C. Speed. 3, J. H. Putney, Dorking. County, T. & H. Heath, Norwich. *hc*, T. & H. Heath; C. Speed; W. Mortitt, Goole. *c*, J. Robinson, Garstang.

COCHINS.—*Cinnamon or Buff.—Cock.*—1, W. A. Burnell, Southwell. 2, E. Winwood, Worcester. 3 and County, W. Brunton, East Dereham. *hc*, H. Lingwood. *Any other variety.—Cock.*—1, T. J. Saltmarsh, Chelmsford. 2 and County, Major Bignold, Norwich. 3, G. G. Baldwin, East Dereham. *Any variety.—Hen.*—Cup and 1, M. Leno, Dunstable. County and 2, Major Bignold. 3, W. A. Burnell. *hc*, J. Everitt, Hadleigh; C. Speed; Mrs. C. Berners, Yoxford. *c*, G. Vincent.

BRAHMAS.—*Dark.—Cock.*—Champion and Section Cups and 1, Horace Lingwood. 2, T. F. Ansdell, Cowley. 3, R. P. Percival, Manchester. County, J. S. Pearson, Manchester. *vhc*, J. Watts, Birmingham. *hc*, J. S. Pearson; W. Brunton. *Hen.*—1, Rev. J. D. Peake, Laleham Vicarage, Chertsey. 2, M. Leno. 3, T. F. Ansdell. *hc*, W. Brunton; J. S. Pearson; Horace Lingwood; E. H. Willett. *c*, G. C. Livett, Soham; W. Brunton; T. F. Ansdell. County, J. S. Pearson.

BRAHMAS.—*Light.—Cock.*—1, P. Haines. 2, G. Walters, Worcester. 3, F. J. Cotterell, Beechfield, Birmingham. County, J. P. Case, Fakenham. *hc*, Mrs. F. Cheshire, Acton. *Hen.*—1 and 2, P. Haines, Palgrave, Diss. 3, F. J. Cotterell. County, J. P. Case. *vhc*, G. Walters. *hc*, J. P. Case; M. Leno; E. J. Bird.

GAME.—*Brown Red.—Cock*—Prince of Wales's Cup, Game Cup, County, and 1, H. E. Martin, Fakenham. 2, W. & H. Adams, Ipswich. 3, J. Cock, Worcester. *vhc*, C. Waney, Creake. *hc*, H. E. Martin; A. Wootton, Fakenham. *Black Red —Cock.*—1 and County, J. S. Pearson. 2, J. Paine. 3, J. F. Walton, Rawtenstall. *hc*, G. H. Fitz-Herbert, Sevenoaks; W. Wainwright, Rugby. *Black and Brown Red.—Hen.*—1, A. Cameron, Rotherham. 2, 3, and County, H. E. Martin. *hc*, A. Wootton; J. S. Pearson; J. P. Gardner, Rugeley; J. Chester.

GAME.—*Any other variety.—Cock.*—1, J. S. Pearson. 2, W. & H. Adams. 3, E. Winwood. County, H. E. Martin. *hc*, H. E. Martin; J. F. Walton. *Hen*—1, T. Whitaker, Melton Mowbray. 2 and *hc*, E. Winwood. County and 3, H. E. Martin.

HAMBURGHS.—*Golden spangled.*—1 and Cup, T. Blakeman, Wolverhampton. 2, W. K. Tickner, Ipswich. 3, B. Reynolds. County, H. K. Plattin, jun., Fakenham. *hc*, J. Robinson. *Golden-pencilled.*—1, W. K. Tickner. 2, J. Robinson. 3 and County, A. C. Chamberlin, Swaffham. *hc*, A. Silver, Long Melford; E. Walton.

HAMBURGHS.—*Silver-spangled.*—1, W. Barker, Mark Lane, London. 2, T. H. Turner, Sheffield. 3, J. Robinson. County, H. K. Plattin, jun. *Silver-pencilled.*—1, J. Robinson. 2, R. W. Bracewell, Earby. 3 and County, J. P. Case. *hc*, B. Norton, Town Malling; E. Walton.

HAMBURGHS.—*Black.*—County Cup, County Prize, and 1, J. P. Casc. 2, J. Long, Bromley Common. 3, J. Robinson. *hc*, T. A. Wright, Great Yarmouth; A. A. Boissier, Penshurst.

MALAYS.—*Cock.*—Cup, 1, and County, E. Branford, Swaffham. 2, S. B. Perry, Lymington. 3, J. G. Falle, Jersey. *hc*, S. Elliott, jun., Lakeard; J. G. Falle; E. Branford; J. Hinton, Warminster; A. Hawkins. *c*, Rev. N. Ridley, Hollington House, Newbury. *Hen.*—1, J. S. Rooth, Chesterfield. 2, County, and *hc*, E. Branford. 3, J. Hinton.

SPANISH.—Cup and 1, H. Wilkinson, Skipton. 2, J. F. Walton. County and 3, Major Ewen, Norwich. *c*, J. F. Dixon.

FRENCH.—1, C. H. Smith, Parkhelds, Derby (Crêve-Cœurs). 2, Mrs. Wicks, Brigg (Crève-Cœurs). 3, E. Walton. County, Mrs. Miller. *hc*, F. Barlow, Cambridge (Houdans); Mrs. Miller. *c*, W. Cutlack, jun., Littleport, Ely (Crève-Cœurs).

ANY OTHER VARIETY.—1, G. W. Boothby, Louth (Golden Polands). 2, R. Youll, Sunderland (Silver Polish). 3 and County, Rev. W. C. Safford, Attleborough Rectory, Norfolk.

GAME BANTAMS.—*Black and Brown Red.—Cock.*—Cup and 1, Capt. T. Wetherall, Kettering. 2, T. Dawson, Epworth. 3, E. Walton. County, J. S. Pearson. *vhc*, W. B. Jefferies, Ipswich. *hc*, J. Eaton, Grantham. *Any other variety.—Cock*—1 and County, J. S. Pearson. 2, T. Dawson. 3, S. Nicholson, Fakenham. *hc*, R. Youll. *Any variety.—Hen.*—1, 2, and County, J. S. Pearson. 3, W. B. Jeffries. *hc*, Capt T. Wetherall; J. S. Pearson.

BANTAMS.—*Any other variety except Game.*—1, M. Leno. 2, R. H. Ashton, Manchester. 3, Rev. F. Tearle, Gazeley Vicarage, Newmarket. County, J. C. Burton, Fakenham *hc*, W. H. Shackleton, Brauford; M. Leno; J. C. Burton; R. Youll; Mrs. J. Longe.

DUCKS.—*Aylesbury or Rouen.*—1 and Special, F. Parlett. 2, F. E. Arter, Canterbury. 3 and County, W. Nicholson. *hc*, Rev. W. C. Safford; Mrs. C. Berners; J. Everitt. *Any other variety.*—1 and 2, M. Leno. 3, J. W. Kelleway Isle of Wight. County, J. Hammond, Dereham. *hc*, J. Hammond; J. W Sharman, Hampton Abbey; Mrs. Miller.

GEESE.—1, E. V. Snell, Barrowden. 2 and County, J. P. Case. 3, Mrs. North. *hc*, Mrs. North; E. Branford.

SELLING CLASS.—*Any variety except Bantams.—Cock.*—1, W. H. James, Fen Ditton (Buff Cochin). 2, A. Wootton. 3, W. White (Black Spanish). 4, Rev. W. Barlow, Fakenham (Dorking). *hc*, G. G. Baldwin (White Cochin); E. Brauford (Malay); H. E. Piattin, jun. (silver-spangled Hamburgh); T. Docwra, Colchester. *c*, T. A. Wright (Black Hamburgh); W. A. Burnell (Cochin); O. E. Cresswell, Bagshot (White Cochin); Mrs. C. Berner (Dorking). *Hen.*—1, J. S. Pearson (Dark Brahma). 2, M. Leno (Cochin). 3, H. H. Hobson, Long Sutton (Colonred Dorking). 4, J. M. Otter, Balderton (Game). *hc*, E. J. Bird (Light Brahma). *c*, G. C. Livett (Dark Brahma); Major Ewen (Black Spanish); E. Branford.

SELLING CLASS.—*Bantams, any variety.*—1, E. Walton. 2, G. P. Tricker, Fakenham (Black Red Game) 3, M. Leno. 4, Mrs. North (Persian Silkies). *vhc*, E. & A. Farrington, Worcester (File); C. J. Pearson (Duckwing). *hc*, E. Branford (Brown Red Game); R. Smith, Southwell (Duckwing). *c*, W. Wright, jun. (Black Red).

PIGEONS.

CARRIERS.—*Cock or Hen.*—Cup and 1, H. Thurlow, Burnham Market. 2, W. Minson, St. Ives. 3, G. Kempton, Islington, London. *hc*, H. J. Lndlow, Norwich; J. Thompson, Bingley; J. Stiles, jun.; W. Minson.

POUTERS.—*Cock or Hen.*—1, C. Martin. 2, Mrs. Ladd, Calne. 3, G. Holloway, jun., Strond. *hc*, Mrs. Ladd; P. R. Spencer, Hereford; J. Stiles (2); H. Thurlow.

TUMBLERS.—*Short-faced Balds.—Cock or Hen.*—1, 2, and 3, W. Woodhouse, King's Lynn. *Short-faced Beards.—Cock or Hen.*—1, 2, and 3, W. Woodhouse. *Any other variety.—Cock or Hen.*—1, H. Yardley, Birmingham. 2, G. Holloway, jun. 3, A. & W. H. Silvester, Sheffield. *hc*, W. D. Brown, Cambridge; A. and W. H. Silvester.

FANTAILS.—*Cock or Hen.*—1, Mrs. Woodhouse, King's Lynn. 2, J. Walker, Newark. 3, J. F. Loversidge, Newark. *hc*, J. Walker; F. Aldiss, Fakenham; P. R. Spencer.

DRAGOONS.—*Cock or Hen.*—1, W. V. Longe, Ipswich. 2, A. W. Wren, Lowestoft. 3, C. Heigham, Ipswich. *hc*, J. Calcutt, Whitney; H. W. Webb, Lower Sydenham; H. Thurlow.

ANTWERPS.—*Cock or Hen.*—1, H. Thurlow. 2, C. S. Boyce, Birmingham. 3, H. Yardley. *hc*, J. F. Theobald, Lower Tooting, London; S. Le Blanc Smith, Sydenham.

JACOBINS.—*Cock or Hen.*—1 and 2, A. Manders, King's Lynn. 3, B. Canney, Leicester. *hc*, W. Nottage; H. W. Webb; J. Thompson (2).

ANY OTHER VARIETY.—*Cock or Hen.*—Cup and 1, H. Yardley. 2, A. P. Byford, Ipswich (Barb). 3, C Read, Cambridge (Barb). *hc*, A. Hamond, Brandon (Runt); H. W. Webb (Archangel); A. & W. H. Silvester.

SELLING CLASS.—1, P. R. Spencer. 2, J. Thompson. 3, J. Walker (Fantails). *hc*, Capt. F. B. Astley, Norwich (Antwerps); Mrs. Ladd (Pouters) A. Hamond.

CANARIES.

NORWICH.—*Clear Yellow.*—1 and *vhc*, G. & J. Mackley. 2 and *hc*, Provart and Willis. *Clear Buff.*—1 and *vhc*, G. & J. Mackley. 2, Provart & Willis.

NORWICH.—*Evenly marked.*—1 and 2, G. & J. Mackley.

NORWICH.—*Ticked and Unevenly-marked Yellow or Buff.*—1, G. & J. Mackley. 2, Provart & Willis. *vhc*, Provart & Willis; G. & J. Mackley.

NORWICH.—*Crested Yellow or Buff*—1 and 2, G. & J. Mackley. *Cinnamon Yellow or Buff.*—1 and *hc*, G. & J. Mackley. 2, A. Palmer.

YORKSHIRE.—*Clear or Variegated Yellow or Buff.*—1, 2, and *hc*, G. & J. Mackley.

CANARY OR CANARY MULE.—*Any other variety.*—1, M. Flynn, Ipswich (Evenly-marked Goldfinch and Canary Mule). 2, R. Bishop, King's Lynn (Golden Lizard). *vhc*, G. & J. Mackley (White Goldfinch and Canary Mule); A. Palmer (Goldfinch Mule). *hc*, J. Brickham, Fakenham (Linnet and Canary and Varicgated Mules); G. & J. Mackley (Goldfinch and Canary Mule).

BRITISH SONG BIRDS.—*Any variety.*—1, 2, and *vhc*, G. & J. Mackley (Blackbird, Goldfinch, and Bullfinch). 3, O. A. Watts, Brixton, London (Blackcap). *hc*, A. Boatwright, Bungay (Goldfinch).

SELLING CLASS.—*Any variety of Canary or British Song Bird*—1, Provart and Willis. 2, G. & J. Mackley (Canary). 3, R. Bishop (Silver Lizard). *vhc*, G. & J. Mackley (Canary and Blackbird); Provart & Wilbs. *hc*, Provart and Willis; J. Dorton, Burnham (Goldfinch); R. Bishop (Golden Lizard). *c*, W. Morgan, Fakenham; G. Richardson, Fakenham.

RABBITS.

LOP-EARED.—Cup, 1, and 3, J. Irving, Blackburn. 2 and County, W. Brunton. *hc*, W. S. Ward; J. Wharton. *c*, Mrs. H. Pickworth, Spalding.

ANY OTHER VARIETY.—1, Miss Mortimer, Ross. 2, G. C. Livett. County and 3, W. Brunton. *hc*, Mrs. H. Pickworth; W. Brunton; J. R. Parsley, Cambridge; B. Greaves, Grimsby; P. Radham, Melksham.

Rev. E. Fellowes, Mr. R. Teebay, and Mr. S. Matthew judged the *Poultry* and *Pigeons;* and Mr. H. Thurlow the *Cage Birds.*

MAIDSTONE POULTRY SHOW.

THIS Show was held on the 13th and 14th inst. in the extensive premises behind the "Bell" Hotel. We shall give a report next week. The following were the awards:—

DORKINGS.—*Coloured.*—1 and 2, R. Cheeseman, Ashford. 3, C. Ratcliffe, Canterbury. *hc*, L. G. W. Stratford, West Malling; R. Cheeseman; E. R. Rice, Sandwich; R. B. Curteis, Tenterden; G. W. Greenhill, Ashford (2).

DORKINGS.—*Silver-Grey.*—1, 2, and 3, F. Cheeseman. *hc*, C. Ratcliffe; Mrs. J. S. Wacher, Saadwich. *c*, Mrs. J. S. Wacher.

DORKINGS.—*White* —1, L. G. W. Stratford. 2, J. Harris, Tunbridge Wells. 3, S. F Jackson, Bexley.

COCHINS.—*Buff or Cinnamon.*—1, C. M. Stickings, Wye. 2, Mrs. A. Christy, Edenbridge. 3 and *c*, W. White, Canterbury. *hc*, C. Dickens, Rochester; G. Dowker, Wingham; F. Hawkins, New Charlton.

COCHINS.—*Any other variety.*—1 and Cup, R. S. S. Woodgate, Tunbridge Wells. 2, J. S. West, Sydenham. 3, Rev. W. C. H. H. D'Aeth, Wateringbury. *hc*, H. A. Watchurst, New Brompton.

SPANISH.—*Black.*—1 and 2, L. G. W. Stratford, Hildenborough. 3 and *hc*, J. Francis, Hildenborough.

BRAHMAS.—*Dark.*—1, Cup, and 2, Mrs. J. G. Hepburn. 3, W. Jacob, Shepherdswell. *hc*, F. Lake, Sittingbourne; Mrs. J. G. Hepburn; A. Rigg, Sevenoaks (2).

BRAHMAS.—*Light.*—1, Cup, and 2, Capt. W. Savile, Wye. 3, Rev. F. T. Scott, Shepherdswell. *vhc*, A. Smith, Goudhurst; H. Stephens, Tunbridge Wells; F. Hawkins. *hc*, R. Boissier, Penshurst. *c*, A. Smith; G. Dowker; Dr. Owens, East Farleigh.

GAME.—*Black-breasted and other Reds.*—1 and 2, J. Jeken, Eltham. 3, Elliott & Harms, Faversham. *hc*, E. Warde, West Farleigh (2); W. Foster, Deal. *Any other variety.*—1, J. Chittenden, Ashford. 2 and *hc*, P. D. Stonham, Ashford. 3, E. R. Rice. *Any variety.—Cocks.*—1 and 3, Elliott & Harms. 2, J. Jeken.

HAMBURGHS.—*Golden-spangled.*—1, J. Long, Bromley. 2, C. Brown, Maidstone. 3, F. Cheeseman. *Silver-spangled.*—1, J. Long. 2, Mrs. Kingsnorth, Ashford. 3, J. K. Lawther, Tunbridge Wells.

HAMBURGHS.—*Gold-pencilled.*—1, J. Long. 2, G. Dowker. 3 and *c*, H. White, Wateringbury. *hc*, F. Hawkins. *Silver-pencilled.*—1 and 3, E. Nortoo, Town Malling. 2, J. Long.

HOUDANS.—1, W. Dring, Faversham. 2 and *c*, F. Lake. 3, W. M. Lancaster, Wateringbury *hc*, Miss E. Mansel, Wrotham.

ANY OTHER VARIETY.—1, J. Long. 2, W. Dring. 3, Mrs. A. Christy. *vhc*, R. S. S. Woodgate; E. Knight, Wye. *hc*, A. Kitchin, Westerham; G. N. Nutt.

BANTAMS.—1, Master M. V. Sandford. 2, W. White. 3, E. Akhurst, Sandwich. *hc*, J. Long; W. D. Little, Blackheath; E. Payne, Dartford; W. S. Marsh, Deal. *c*, G. N. Nutt. *Any variety not Game.*—1, R. S. S. Woodgate. 2, Mrs. E. C. Lee, Penshurst. 3, G. H. Nutt. *hc*, W. White; J. Ware, jun., Faversham; Miss F. A. Stickings, Ashford; G. H. Nutt.

DUCKS.—*Aylesbury.*—1, W. Jacob. 2, F. E. Arter, Canterbury. 3, H. Barrow, Bexley. *hc*, J. Roper, Hollingbourne. *Rouen.*—1, F. Warde. 2, C. Ratcliffe. 3, F. Cheeseman. *vhc*, J. Harvey, jun., Canterbury (?). *hc*, R. Bowen, Rochester. *Any other variety.*—1, F. Cheeseman. 2, R. Blinkhorn, Sandling. 3, R. S. S. Woodgate.

GEESE.—1, G. H Fitz-Herbert, Sevenoaks. 2 and *hc*, J. Beazley, Gravesend. 3, H. White. *vhc*, L. G. W. Stratford.

TURKEYS.—1 and 2, A. Warde. 3, L. G. W. Stratford. *vhc*, F. Warde; G. Dowker; Countess of Aylesford, Aylesford.

SELLING CLASS.—*Cock or Drake.*—1, F. Warde. 2, F. Hollick, Rochester. 3, Col. Hassard. *vhc*, H. White; W. S. Holding, Yalding; G. W. Greenhill; Mrs. J. G. Hepburn; J. K. Lawther; E. Durrant; B. Norton. *hc*, J. K. Parton, Maidstone; W. Dring; M. Sandford; A. Smith; J. G. Hepburn (2); F. E. Arter; C. Brown.

SELLING CLASS.—*Hens or Ducks.*—1, J. Harvey, jun. 2, R. S. S. Woodgate. 3, Rev. W. C. H. H. D'Aeth. *vhc*, Mrs. Cheere, Aylesford; W. Dring; Rev. F. T. Scott; Rev. W. C. H. H. D'Aeth; F. Cheeseman; E. Durrant; C. Brown. *hc*, Miss Baldwin, Harrietsham; Miss E. Mansel; J. Harris; E. McMorland, Chislehurst; W. S. Monckton, Maidstone; G. Dann, jun., Maidstone; E. Goodwin, Thornhills (2). *c*, E. McMorland.

SELLING CLASS.—1, Major Hartley. 2, T. Goodwin. 3, W. Dring. *vhc*, T. Goodwin. *hc*, R. S. S. Woodgate; Master M. V. Sandford; H. W. Brooks, Woolwich; Mrs. Middleton, Brenchley; R. B. Curteis.

PIGEONS.

CARRIERS.—1 and 2, M. H. Gill, Ramegate. *hc*, Col. Hassard, Sheerness. *c*, G. H. Nutt.

POUTERS.—1, 2, and *hc*, M. H. Gill. *c*, F. Winser, Hadlow; G. H. Nutt.

FANTAILS.—1, R. W. Cooper, Rochester. 2, M Sandford, Dover. *c*, G. W. Greenhill.

TUMBLERS.—1 and 2, M. H. Gill. *hc*, M. H. Gill; Mrs. T. Homes, Lower Sydenham. *c*, F. Winser.

TRUMPETERS.—1 and 2, W. Mills, Canterbury. *c*, R. W. Cooper.

ANY OTHER VARIETY.—1, G. H. Nutt. 2, — Lancaster, Maidstone. 3, F. Pine, jun., Maidstone. *hc*, L. D Mackinnon, Maidstone; R. G. Hills, Maidstone; E. Durrant, Tunbridge Wells (2); T. Homes; G. H. Nutt (2).

SELLING CLASS.—1, E. Durrant. 2, G. West, East Greenwich. 3, D. Keall, Sittinghourne. *hc*, H. W. Webb, Lower Sydenham. *c*, G. West; F. Winser; — Lancaster; F. Gasson, Maidstone.

RABBITS.

LOP-EARED.—*Buck or Doe.*—1, H. Carpenter, Maidstone. 2 and *c*, G. H. Nutt. *hc*, O. Cooper, Ryarth (2).

HIMALAYAN.—1, G. W. Greenhill. 2, E. Durrant. *hc*, G. H. Nutt. *c*, Hon. J. Boscawen, Mereworth Castle; G. C. Sills, Maidstone; A. Mercer, Maidstone; G. H. Nutt.

SILVER-GREY.—1 and 2, G. H Nutt. *hc*, R. A. Boissier; G. H. Nutt.

BELGIAN HARE.—1, G. H. Robinson, Edenhurst, Sevenoaks. 2 and *c*, G. H. Nutt.

ANY OTHER VARIETY.—1, R. A. Boissier. 2, G. H. Nutt. *hc*, W. Bryant, Maidstone.

SELLING CLASS.—*Buck or Doe.*—1, L. G. W. Stratford. 2, E. Goodwin. *hc*, Miss H. Clinch.

CATS.

TABBY, OR TABBY-AND-WHITE.—*Short-haired.*—1, T. Bramble, Harrietsham. 2, A. Smith. 3, — Ambrose, Maidstone. *hc*, Miss E. Clinch, Sittingbourne; G. H. Nutt.

BLACK.—*Short-haired.*—1, T. Ranger, East Farleigh. 2, G. H. Fitz-Herbert.

LONG-HAIRED.—1 and Special, Miss S. A. Buchanan. 2, Miss S. A. Mackinon, Canterbury. *hc*, Miss S. A. Buchanan; Mrs. E. C. Lee.

ANY OTHER COLOUR OR VARIETY.—1, H. White. 2, Mrs. S. Smith, Sissinghurst.

KITTENS.—1, E. Durrant. 2, Mrs. E. C. Lee.

JUDGES.—*Poultry and Pigeons:* Mr. R. Teebay. *Cats and Rabbits:* Mr. G. Billett.

SOUTH OF IRELAND POULTRY SHOW.

THIS Show was held in Cork on the 12th, 13th, and 14th inst. The awards were as follows:—

SPANISH.—1, Mrs. Hay, Queenstown.

DORKINGS.—*Silver-Grey.*—1, S. Mowbray, Mountrath. 2, Mrs Sargent, Waterloo, Cahir. Medal, Miss A. M. Warburton, Kill, Straffan. *hc*, Miss A. M. Warburton; S. Mowbray. *c*, Miss A. M. Warburton. *Any other colour.*—1, J. Barlow, Castleknock, Dublin. 2, S. Mowbray.

HOUDANS.—1, E. Morrison, Parsontown. 2, L. A. Beamish, Cork. *hc*, Rev. V. Holohan. *c*, Mrs. Hay.

CREVE-CŒUR OR LA FLECHE.—1, 2, and Medal, Rev. V. Holohan, Mallow. *c*, J. C. Cooper.

HAMBURGHS.—*Spangled.*—1 and 2, S. Mowbray. *c*, L. Stoney, Dublin. *Pencilled.*—1, Lady A. Lloyd, Villierstown, Cappoquin. 2, S. Mowbray.

POLISH.—1 and 2, J. K. Milner, Dublin. *c*, J. Barlow.

GAME.—1 and Medal, R. P. O'Grady, Rochestown, Cork. 2 and *hc*, M. C. Cramer, Kinsale. *c*, M. C. Cramer; W. Johnson, jun; J. Dowden.

GAME BANTAMS.—1, W. Johnson, jun., Cork. 2, L. Stoney. *c*, G. Knagg; R. P. O'Grady; W. J. Tomkins, Mardyke.

BRAHMAS.—*Dark.*—1, Mrs. Hay. 2, W. J. Rumley. *hc*, T. Mallinson; W. J. Rumley. *Chickens.*—1 and Medal, Mrs. Sargent. 2, W. J. Rumley. *hc*, Rev. V. Holohan; T. Mallinson; S. Mowbray. *c*, Mrs. Hay.

BRAHMAS.—*Light.*—1, F. Hodder, Blackrock. 2, D. Sullivan, Dublin. *c*, A. Field. *Chickens.*—1, Mrs. Forrest, Milltown. 2, F. Hodder. *c*, A. Field; D. Sullivan; H. L. Tivy, Cork.

COCHINS.—*Buff or Cinnamon.*—1, Mrs. Sargent. 2, L. Stoney. *hc*, F. Robertson; H. L. Tivy. *c*, Mrs. Hay; F. W. Zurhorst. *Any other colour.*—1, M. Mahoney, Baldoyle. 2, Lady A. Lloyd. *c*, J. K. Milner *Chickens* —1, Capt. W. Sullivan, Dublin. 2, M. Mahoney. *hc*, M. Mahoney; Rev. V. Holohan. *c*, Mrs Sargent; Lady A. Lloyd; F. Robertson, Belfast.

TURKEYS.—*Any variety* —1, S. Mowbray. 2, G. Richard, Cork. *hc*, Capt. Bury. *Poults.*—1, S. Mowbray. 2, R. P. O'Grady. *hc*, Viscountess Doneraile; Capt. Bury; Miss H. M'Craith.

GEESE.—1, S. Mowbray. 2, A. N. Thompson, Carrigaline. *hc*, Lady A. Lloyd.

DUCKS.—*Rouen.*—1, F. Robertson. 2, S. Mowbray. *c*, W. H. Massy; P. Power. *Aylesbury.*—1, S. Laue, Cork. 2, Miss A. M. Warburton. *hc*, F. Robertson.

ANY VARIETY NOT CLASSED.—1 and *hc*, Col. Stawell, Bandon. 2, S. Mowbray. *c*, Mrs. T. W. Webber; Viscountess Doneraile; Miss B. Dowling.

GAME.—*Cock.*—1, F. W. Zurhorst, Dublin. 2 and *hc*, M. C. Cramer.

SELLING CLASS.—1, Mrs. Sargent. 2, Lady A. Lloyd. 3, S. Mowbray. *hc*, E. A O'Donnell; M. Mahoney; Mrs. Sargent; Mrs. Forrest; Mrs. V. Tomkins; W. Korrigan; Lady A. Lloyd; Mrs. Hay. *c*, Mrs. Sargent; E. O'Donnell; P. Marmion; Rev. V. Holohan; Lady A. Lloyd; J. H. Hutchinson; Mrs. Hay; J. M'Carthy.

EXTRA CLASS.—*Pheasants.*—1, P. Power, jun., Mallow. *hc*, Col. Stawell. Medal for the greatest number of prizes in poultry, S. Mowbray,

PIGEONS.

POUTERS.—*Cock.*—1, W. A. P. Montgomery, Belfast. 2, W. Johnson, jun. *hc*, J. H. Hutchinson; F. W. Zurhorst. *Hen.*—1, W. A. P. Montgomery. 2, J. H. Hutchinson. *hc*, F. W. Zurhorst. *c*, J. Lloyd.

CARRIERS.—*Cock.*—1, W. A. P. Montgomery. 2, W. J. Rumley. *vhc*, J. Jeffries, Cork. *hc*, W. J. Rumley; J. Stanley. *c*, H. L. Tivy. *Hen.*—1, W. A. P. Montgomery. 2 and *hc*, J. Stanley. *c*, J. Jeffries; H. L. Tivy.

BARBS.—*Cock.*—1, W. A. P. Montgomery. Equal 2, W. A. P. Montgomery; J. Dowling. *vhc*, J. Stanley. *hc*, W. J. Rumley. *c*, W. H. Bennett; J. Jeffries. *Hen* —1 and 2, W. A. P. Montgomery. *hc*, W. J. Rumley. *c*, J. Jeffries.

OWLS.—1, W. G. Henry, Dublin. 2, W. J. Lumley. *hc*, W. J. Rumley; W. G. Henry. *c*, J. Dowling.

TRUMPETERS.—1 and 2, J. Perrott. *hc*, W. J. Rumley. *c*, J. H. Hutchinson.

JACOBINS.—1 and 2, R. W. Smith, Tipperary. 3, W. J. Rumley. *hc*, J. H. Hutchinson; W. J. Rumley; R. W. Smith. *c*, R. W. Smith; J. Perrott; F. W. Zurhorst.

FANTAILS.—1, W. G. Henry. 2, W. J. Rumley.

NUNS.—1 and 2, Mrs. J. M. Smyth, Glanmire.

TURBITS.—1, 2, and *c*, W. J. Rumley. *hc*, H. L. Tivy.

MAGPIES.—1, J. H. Perrott. 2, W. J. Rumley.

TUMBLERS.—1, W. J. Rumley. 2, J. H. Perrott. *hc*, W. T. Rumley; J. H. Perrott.

DRAGOONS.—1 and Medal, J. Stanley, Blackburn. 2, J. Jeffries. Extra 2, W. J. Rumley. *hc*, W. J. Rumley; J. Jeffries; J. Stanley; J. Dowling; F. Robertson. *c*, W. G. Henry; J. Jeffries; J. K. Milner; J. Dowling.

ANTWERPS.—1 and *hc*, J. Stanley. 2, F. W. Zurhorst. *c*, W. Johnson jun.; J. K Milner.

ANY VARIETY NOT CLASSED.—1, W. J. Rumley. 2, J. H. Perrott. *hc*, J. Hollwey; W. J. Rumley; J. K. Milner. *c*, J. Lloyd; F. W. Zurhorst.

CARRIERS.—*Young.*—1 and Medal, W. J. Rumley. 2, J. Jeffries. *hc*, W. J. Rumley; J. Jeffries. *c*, J. Jeffries; J. Stanley.

BARBS.—*Young.*—1 and Medal, W. J. Rumley. 2, W. A. P. Montgomery. *hc*, W. H. Bennett; J. Dowling. *c*, J. Jeffries; W. J. Rumley; J. Dowling.

SELLING CLASS.—1, W. H. Bennett. 2 and 3, J. Jeffries. Extra 3, J. Dowling. *hc*, W. H. Bennett; W. J. Rumley; W. G. Henry; J. Jeffries; J. Dowling; F. W. Zurhorst. *c*, W. H. Bennett; W. J. Rumley; J. Jeffries; J. Stanley; H. L. Tivy; J. Dowling; F. Robertson.

Medal for the greatest number of prizes in Pigeons, W. J. Rumley.

CAGE BIRDS.

CANARIES.—*Yellow.*—1 and 2, F. Hodder. *hc*, D. Ryan. *c*, W. Scannell; D. Ryan. *Any other colour.*—1 and 2, T. Babington, jun. *hc*, W. Egan.

BULLFINCHES.—1, R. P. O'Grady. 2, Miss B. Dowling, Blackrock, Cork.

GOLDFINCHES.—1, W. Egan, Cork. 2, R. P. O'Grady. *hc*, A. Dowling.

LINNETS —1, E. Russell. 2, W Egan.

GOLDFINCH MULES.—1, R. Bull. 2, N. W. Johnson.

LINNET MULES.—1, J. Dowling. 2, W. Egan. *c*, R. P. O'Grady.

BLACKBIRDS.—1, J. Carney, Cork. 2, T. Twomey, Cork.

THRUSHES.—1, R. P. O'Grady. 2, J. Carney. *hc*, J. Callaghan.

LARKS.—1, J. Callaghan. 2, G. J. W. Johnson. *hc*, A. Gordon.

PARROTS.—1 and 2, D. A. Bayly.

ANY VARIETY NOT CLASSED.—1 and *hc*, J. Withers, Cork. 2, J. J. Riordan.

JUDGES.—*Poultry and Pigeons*: Mr. P. H. Jones; *Cage Birds*: Mr. M. C. Cramer and Mr. P. Hay.

PAISLEY ORNITHOLOGICAL SOCIETY'S SHOW.

THE twenty-first annual Exhibition and competition under the auspices of the Paisley Ornithological Society was held in the Drill Hall, on the 1st and 2ud inst. It was the largest that the Society has yet held. This year they had to refuse a great number of entries in consequence of waut of space and adherence to the limited time till which entries could be received. The awards were as follows:—

SPANISH.—1 and Special, J. More, Hamilton. 2, R. Begg, Dalry. 3, J. Bryce, Airdrie. *Chickens.*—1, R. Begg. 2, A. Vnill, Airdrie. 3, W. Greenshields, Kilmarnock. 4, W. M'Intyre, Ochiltree. *Hens.*—1, W. Neilson, Johnstone. 2, J. Crawford, Beith. 3, A. Vnill. 4, R. Begg.

DORKINGS —*Coloured.*—1 and Special, Mrs. Alston, Craighead, by Hamilton. 2 and 4, Z. H Heys. Barrhead. 3, Mrs. Alston. *Chickens.*—1, Z. H. Heys. 2, Mrs. Alston. 3, A. J. Mather, Kilmarnock.

DORKINGS.—*White.*—1 and 3, J. Pettigrew, Dalmellington. 2, J. Aitken, Paisley. 4, W. Arnot, Dalmellington.

CHINESE.—1, J. Wyse. Falkirk. 2, T. Bruce, Busby. 3, J. Telford, Beith.

BRAHMA POOTRA.—1, H. Wyse, Rishopbriggs. 2, J. Angus, Muirkirk. 3, G. Willison, Kilmarnock. 4, J. Honeyman, Skelmorlie.

SCOTCH BREED.—1 and Special, H. B. Marshall, Glenlove, Airdrie. 2, W. Purdie Bothwell. 3, R. M'Lellan, Wallacetown, Ayr. 4, J. Clarke, Dalserf, by Carlnke.

HAMBURGHS.—*Golden-spangled.*—1, A. Begg, High Blantyre. 2, A. Friskin. 3, W. Crawford, Beith 4, A. Robertson, Kilmarnock. *Hens.*—1, J. Jardine, Kilmarnock. 2, A. Friskin. 3, A. Black, Kilpatrick. 4, A. Robertsen, Kilmarnock.

HAMBURGHS —*Golden-pencilled.*—1 and Special, J Graham, Largs. 2, H. Pickles, Earby, Skipton. 3 and 4, D. Gilmour, Kilmarnock. *Hens.*—1, R. M'Millan, Holly Bush 2, D. Ferrie, Rutherglen. 3, W. Linton, Selkirk, Slotharn Bank. 4, D. Langland.

HAMBURGHS.—*Silver-spangled.*—1, H. Pickles. 2 and Special, D. Lachland, Kilmaurs. 3, Scott & Boo'h, Bury. 4, R. Thomson. Alexandria. *Hens.*—1, A. Yendal, Galston. 2, H. Pickles. 3, A. Henderson, Barrhead. 4, J. Park, East Kilbride.

HAMBURGHS.—*Silver-pencilled.*—1 and Special, H. Pickles. 2, H. Smith, Keighley. 3, A. Angus, Galston. 4, J. Lochhead, Kilbarchan. *Hens.*—1, R. Borland, Kilbarchan. 2, R. Muir, Craigie. 3, T. Alexander, Bathgate. 4, J. Lochhead.

POLANDS.—*Topped.*—1, W. Good, Airdrie. 2 and 4, J. Laird. 3, J. Wylie, Johnstone.

GAME.—*Black-breasted and other Reds.*—1 and Special, J. Waddel, Airdrie. 2, J. & C. Sneddon, Tollcross. 3, D. Mackie, Stewarton. 4, G. Williamson, Johnstone. *Any other colour.*—1 and 3, R. Heys. 2, J. Waddel. 4, N. Forrest, Whiteinch. *Hens.*—1, R. Heys. 2, N. Neilson. 3, J. Ferguson, Dalmuir. 4, J. Clark.

ANY OTHER VARIETY.—1, J. C. Shaw, Barrhead. 2, H. Pickles. 3, D. Honeymoon, Larbert. 4, J. M. Wilson, Kilmarnock.

CROSS BREEDS.—1, 2, and 3, J. Pollock, Mearns, West Milton. 4, A. Brown, Neilston.

DUCKS.—*Aylesbury.*—1, 2, and Special, A. Robertson. 3, Z. H. Heys. 4, T. Adam, Renfrew. *Any other variety.*—1, Mrs. Alston, Craighead. 2, H. R. M'Millon, Blantyre. 3, J. Young, Neilston. 4, J. Pollock, Mearns.

GAME BANTAMS.—*Black-breasted Reds.*—1, J. Mather, Strathaven. 2, P. M'Quattie, Bonhill. 3, J. Taylor, Johnstone. 4, T. Barker, Burnley. *Any other variety.*—1, J. Campbell, Pollokshaws. 2, J. Scoular, Kilmarnock. 3, J. M'Laren, Kilmarnock. 4, Z. H. Heys. *hc*, T. Barker; Gow & Walker, Kilbarchan.

BANTAMS.—*Black.*—1, J Rouston, Rutherglen. 2, R. H. Ashton, Mottram, Manchester. 3 and 4, D. M Laren, Kilmarnock. *hc*, J. Currie, Kilmarnock. *c*, B. Brown, Bonhill. *Any other colour.*—1 and 2, W. Kerr, Beith. 3, A. Robertson. 4, J. Mitchell, Paisley. *hc* J. H. Law, Birmingham.

SELLING CLASS —1 and Special, Mrs Alston. 2, J. Waddell, Airdric. 3, R. Borland, Kilbarchan. 4, J. Ferguson, Dalmuir.

PIGEONS.

POUTERS.—*Black or Blue.*—*Cock.*—1 and Special, G. Wallace, Durnbank, Glasgow. 2, G. Andrews, Beith. 3, H. Thomaon, Glasgow. *Hen.*—1, G. Wallace. 2, H. Thomann. 3, G. Andrews.

POUTERS.—*Any other colour.*—*Cock.*—1, G. Wallace. 2, A. Dunleavy, Glasgow. 3, H. Thomson. *Hen.*—1, J. R. Renuards, Helensburgh. 2 and 3, G. Wallace.

TUMBLERS.—*Short-faced.*—1, 2, and 3, M. Stewart, Glasgow. *Any other variety.*—1, Miss A. Blair, Johnstone. 2, A. Gray, Kilbarchan. 3, J. Crawford.

CARRIERS.—1, 2, and Special, M. Stewart. 3, M. Gilmour, Inchmnan.

FANTAILS.—1, Miss A. Blair. 2, J. Galt, Kilbirnie. 3, W. Stevenson, Beith.

JACOBINS.—1, J. Lohore, Larkhall. 2, J. R. Renards, Helensburgh. 3, J. G. Orr, Beith.

NUNS.—1 and 2, A. Duthie, Montrose. 3, J. Gilmour, jun., Galston.

TURBITS.—1, J. G. Orr. 2, J. R. Renards. 3, M. Gilmour.

COMMON.—1, Cumming & Fleming, Beith. 2 and 3, D. Weddle, Gatesida, Beith.

ANY OTHER VARIETY.—1, A. Dunleavy. 2, J. F. Cunningham, Beith. 3, J. G. Orr.

SELLING CLASS. — 1, R. Raines, Stirling. 2, A. Dunleavy. 3, H. Davis, Kilbirnie.

CANARIES.

CLEAN.—*Pair.*—1 and Special, J. Hood, Kilbirnie. 2, W. Clark, Kilbarchan. 3, G. Grant, Glaagow. 4, T. Dalton, Ayr.

YELLOW.—*Cock.*—1 and Special, J. Thorpe, Dumfries. 2, G. Grant. 3, T. Scott, Carluke. 4, A. Kelly, Paisley. 5, J. Johnstone, Glasgow. *Hen.*—1 and Special, R. Byron, Dalry. 2, S. Brown, Glasgow. 3, P. Wilson, Douglas.

BUFF.—*Cock.*—1, N. M'Lean, Glasgow. 2, W. Paterson. 3, W. Stevenson, Inkermann. 4, G. Grant. 5, R. Ritchie, Renton. *Hen.*—1, W. Stevenson. 2, J. Graham, Kilmarnock. 3, G. Grant. 4, J. Kennedy, Paisley. Special, J. Grieve, Leith.

PIEBALDS.—*Pair.*—1 and Special, D. Gibb, Anchinheath. 2, W. Thom, Stevenson. 3, A. Kelly. 4, J. Gibson, Paisley.

PIEBALDS —*Yellow.*—*Cock.*—1, J. M'Cuthon, Airdrie. 2, W. Cochran, Glasgow. 3, T. Jamieson, Kilbarchan. 4, C. Aird. Kilmarnock. 5, W. White, Renfrew. *Hen.*—1 and Special, J. Pettigrew, Carluke. 2, M. Barr, Paisley. 3, J. Grieve. 4, C. Aird. 5, R. Houston, Kilbirnie.

PIEBALDS.—*Buff.*—*Cock.*—1 and Special, W. Hunter, Kilbirnie. 2, R. Stevenson, Galston. 3, T. Christie, Glaagow. 4, A. S. Barr, Glasgow. 5, N. M'Lean. *Hen.*—1, J. Brown, Paisley. 2, A. Kelly, Paisley. 3, J. Grieve. 4, J. Smith, Beith. 5, J. Mitchell, Perth.

FOCL.—1 and Special, W. Hunter. 2, D. Perric, Paisley. 3, J. Grieve.

GREEN.—1 and Special, W. Thom. 2, J. Barr, Glasgow. 3, W. Hampherson, Glasgow.

GOLDFINCH MULE.—1, A. A. Mauchan, Dumbarton. 2, J. M'Pherson, Paisley. 3, J. Thorpe, Dumfries.

GOLDFINCH.—1, T. Conn, Kilwinning. 2, T. Reive, Glasgow. 3, W. Arthur, Paisley.

HOME BIRDS.—1, W. Barrlas. Alexandria (Bullfinch). 2, Miss J. Neilson (Cock of the north). 3, J. Bryson, jun.. Paisley (Starling).

FOREIGN BIRDS.—1 and 2, Mrs. Wilson, Kilmarnock (Cockatoo and Parrot). 3, A. M'Phee, Paisley (Parrot).

We have received the following notes on the Pigeon classes:—*Pouters*, Black or Blue, cock.—All the placed birds were Blues. First-and-special good in limb; second longer in feather, but shorter in limb, and deficient in style; third we could not get to show. Pouter cocks, Any other colour.—First and second Whites; third Mealy, which deserved second place. Pouter hen, Black or Blue —First Black; second Blue, with very wide-set limbs; third bare of leg-feathering and bishop-winged. Ponter hen, any other colour.—First White, hardly deserved to be placed; second and third beat her hollow. The latter was a Red, but bad in colour. The Pouter class was altogether a very indifferent one, there being not a really good specimen in the lot; for the four classes there were only twenty-nine entries. Short-faced *Tumblers*, in pairs.—First and second Almonds; third Blacks. All very good in head properties, but we thought a little deficient in colour. *Tumblers*, any other colour.—First were very pretty Balds; second good Blacks; third very coarse Yellows. 54½ should have had third place. *Carriers.*—First Duns; second Blacks. These were magnificent specimens, and the only Pigeons in the Hall of special merit. The third were "duffers." *Fantails.*—First Whites; second Saddlebacks; third Whites. We liked pen 63 best, and would have placed them first. Second were right placed, and we should have substituted 72 for the third-prize pen. We could have bet onr hat (it is an old one) that several pens in this class were made up of hens, and some of these were among the winners. *Jacobins.*—First Yellows; second and third Reds. Pen 85 contained a good pair in bad condition. No. 80 also very good. *Nuns.*—All Blacks, and prize birds were placed. Lots of trimming, as usual. *Turbits.*—First good; second bad; third fair. No. 110 should have had second place. Common Pigeons.—The prize birds were all dapples, and we think the Judge did well in this. Any other variety and Selling classes contained nothiug worthy of notice, with the exception of a pair of White Foreign Owls, shown in wretched condition.

The prizes offered were 15*s.*, 10*s.*, and 5*s.*, with card for fourth prize, and should have brought together a great many more birds. There were only 167 entries in this department. We are accustomed to see considerably more birds, and as good in quality, at the village shows, where the prize money is less than one-third that offered here. Perhaps the names of the Judges not being advertised had something to do with this. We would like to see the Paisley Show well patronised by the fancy, as it well deserves to be, and we hope in future the Committee will leave no stone unturned to make it what it ought to be—second to none on their side the border. The birds were in dome-shaped wire pens, all fastened down, and they were particularly well cared for with food and water. They were arranged in double tiers; those in the lower were too dark, and those in the upper too high to be seen to advantage. The Judge, Mr. McLean, is a new hand; we hail his advent. He did his work well, and only requires experience to impart a little more confidence. We were sorry to see large stacks of hampers outside, and exposed

to the heavy rain. They must have got soaked, and birds going long distances in these are sure to be the worse for it.

JUDGES.—*Poultry:* Mr. A. Paterson, Airdrie; Mr. T. Struthers, Larkhall; Mr. J. Sharp, Johnstone; Mr. T. Raines, Bridge Hough, Stirling; Mr. C. M'Gechan, Hamilton; Mr. J. Paton, Stewarton; Mr. J. Stewart, Thistlebank, Helensburgh; Mr. J. Stewart, Barrhead. *Pigeons:* Mr. G. J. M'Lean, India Buildings, Edinburgh. *Cage Birds:* Mr. J. Fulton, Beith; Mr. T. Buchanan, Kinning Park, Glasgow; Mr. J. Graham, Kilmarnock; Mr. J. Lindsay, Hamilton; Mr. J. White, Paisley; Mr. W. Weir, Paisley; Mr. M. Barr, Paisley; Mr. R. White, Paisley.

SPALDING COLUMBARIAN SOCIETY'S SHOW.

THIS was held on the 14th inst. The following were the awards:—

POUTERS.—*Blue.—Cock.*—1 and Extra, H. B. Massey, Spalding. *Hen.*—1, H. B. Massey.
POUTERS.—*White.—Cock.*—1, — Simpson. *Hen.*—1, — Simpson.
POUTERS.—*Any other colour.—Cock.*—1, — Simpson. *Hen.*—1, — Simpson.
CARRIERS.—*Black.—Cock.*—1 and Extra, — Bulmer. Cup. H. B. Massey. 3, W. Massey. *Hen.*—1, H. B. Massey 2, — Bulmer. 3, W. Massey.
CARRIERS.—*Dun.—Cock.*—1, W. Massey. 2, — Bulmer. *Hen.*—1 and 2, — Bulmer. 3, W. Massey.
CARRIERS.—*Any other colour.—Cock.*—1, H. B. Massey. 2, W. Massey. *Hen.*—1 and 2, W. Massey. 3, H. B. Massey.
BARBS.—*Black or Dun.—Cock.*—1, Extra, and 2, H. B. Massey. 3, W. Massey. *Hen.*—1, Extra, and 3, W. Massey. 2, H. B. Massey.
BARBS.—*Any other colour.—Cock.*—1 and 2, W. Massey. 3, H. B. Massey. *Hen.*—1, W. Massey. 2, H. B. Massey. *Cock or Hen.*—1, — Simpson.
ANTWERPS.—1 and 2, — Shadford.
TUMBLERS.—*Almonds.*—2, H. B. Massey. *Any other colour.*—1 and Extra, H. B. Massey. 2 and 3, — Dows.
FANTAILS.—1, Extra, and 2, — Simpson.
OWLS.—3, — Dows.
JACOBINS.—*Reds*—1, Extra, and 2, — Royds. *Any other colour.*—1, 2, and 3, — Royds.
TRUMPETERS.—1 and 2. — Simpson.
RUNTS.—1, — Dows. 2 and 3, H. B. Massey.
ANY VARIETY.—1, H. B. Massey. 2 and 3, — Dows. *hc,* — Simpson; — Dows.

YOUNG BIRDS.

WHITE.—*Cock.*—1, — Simpson. *Hen.*—1, H. B. Massey. 2, — Simpson.
CARRIERS.—*Black.—Cock.*—1 and Extra, — Bulmer. 2, H. B. Massey. 3, W. Massey. *Hen.*—1, — Bulmer. 2 and 3, W. Massey. *hc,* — Simpson; — Bulmer.
CARRIERS.—*Dun.—Cock.*—1, W. Massey. 2, — Simpson. 3, — Buffham. *Hen.*—1 and 2, — Bulmer. 3, — Simpson. *hc,* W. Massey.
CARRIERS.—*Any other colour.—Cock.*—1, H. B. Massey. 2, W. Massey. *Hen.*—1 and 2, W. Massey.
BARBS.—*Black.—Cock.*—1 and Extra, H. B. Massey. 2, W. Massey. 3, — Buffham. *Black or Dun.—Hen.*—1 and 2, W. Massey. 3, H. B. Massey.
BARBS.—*Any other colour.—Cock.*—1, W. Massey. *Hen.*—1, W. Massey.
SELLING CLASS.—1 and Extra, H. B. Massey. 2, — Simpson. 3, — Buffham. *hc,* — Shadford. *Pair.*—1 and 3, — Simpson. 2, H. B. Massey.

RABBITS.

LOP.—*Buck or Doe.*—1 and Cup, — Boyle.
BELGIAN.—*Buck.*—1, W. Massey. 2, — Dows. *Doe.*—1 and 3, — Buffham. 2, — Boyle. *hc,* — Dows.
SILVER-GREY.—1 and 2, — Boyle. 3, —Dows. *c,* — Buffham.
HIMALAYAN.—1 and 3, — Boyle. 2, — Dows.
DUTCH.—1, — Boyle.
ANY VARIETY.—1, — Boyle. 2, — Buffham.
HEAVIEST.—1, — Buffham.

OPEN RABBIT CLASSES.

LOP-EARED.—1, Mrs. H. Pickworth, Spalding. 2, B. Greaves, Cleethorpe. 3 and *hc,* T. Schofield, jun., Cheetham. Extra 3, C. King. *vhc,* T. & E. J. Fell. *c,* J. Irving (2).
BELGIAN HARE.—1, G. E. Livett. 2, R. J. Foster. 3, J. Poole. Extra 3, A. Hudson. *hc,* J. T. Billett; W. Whipham. *c,* C. Kitchen.
SILVER-GREYS.—1, A. Hudson. 2, Miss Mortimer. 3, J. Hallas. Extra 3, H. W. Wright; A. Canty; J. Hallas. *hc,* Mrs. Pickworth; B. H. Glew. *c,* T. Schofield, jun.
DUTCH.—1, J. Martin. 2, J. Irving. 3, B. Greaves. Extra 3, A. Hudson. *hc,* H. C. Gilbert. *c,* Mrs. H. Pickworth; G. Biddis.
HIMALAYANS.—1, C. G. Mason. 2, Dr. Eames. 3, S. Ball; Mrs. Pickworth. *vhc,* T. Hinks; G. H. Riding. *hc,* G. E. Levitt. *c,* J. Hindley.
ANY OTHER VARIETY.—1, J. Martin (Angora). 2, Mrs. Pickworth. 3, J. Hallas.
HEAVIEST.—1, P. Booth. 2, — Jessop. 3, J. Brown.
SELLING CLASS.—1, J. Hallas. 2, C. King (Lop). 3, H. Hincks (Silver-Grey). Extra 3, J. T. Codling (Lop). *vhc,* G. H. Riding (Angora). *hc,* A. C. Wiseman (Lop). *c,* T. Schofield (Dutch); A. Canty (Lop).

JUDGES.—*Pigeons:* Mr. Tegetmeier. *Rabbits:* Messrs. Smith and Harrison.

CRYSTAL PALACE POULTRY SHOW.—This will take place about November 22nd to 24th. No foundation exists for the report that Messrs. Howard and Nichols will not be the Secretaries.

BAILDON ORNITHOLOGICAL SHOW.

THE entries of Pigeons were very good in most of the classes. The pens were on Turner's principle and showed the birds well, although the light was not the best, the day being very dull. The birds were well fed and watered, and so far all was well; but in other respects the management was bad, for each class commenced with No. 1, and this made it most difficult to get through the classes without innumerable mistakes. But what was worst of all was that the classes were not arranged so as to follow each other, but were placed one at one end and the next perhaps in some other wing of the building; and we would suggest that in future some one be engaged to arrange and manage this section, for the Show having assumed good proportions, it is but a duty owed to the visitors and exhibitors.

Jacobins were first, and were a good lot, a Yellow hen being placed first, and Red second and third, and there was a grand Blue also. Of *Pouters*, first was White and second Black, while the third went to a Blue. *Fantails* were good, and the awards well made, the style and carriage of the winners being of high merit. English *Owls*, cock or hen, were a heavy class, and the first and second winners Blue. Mr. Binns's birds as usual not putting in appearance. *Antwerps* were in great force, no less than 112 birds being shown. In Short-faced cock or hen, the first award was made to Red Chequer hen which for form and head is most perfect, and a bird of last season. Second was a Silver Dun cock, but this was a mistake, for if the bird has not an actual frill, the breast feathers overlap each other. Third, a Blue Chequer cock, was a good bird. *Antwerps*, Long-faced, the first and second were Red Chequers, and capital birds, but some were left out which ought to have been in the list, notably Mr. Ellis's grand-headed bird, but the light was so bad here that there is little wonder he was not seen. In hens were some very good birds, both as regards head, style, and feather, and we think had these two classes been seen by our friends in the south it would become a recognised fact with them that the standard must have been settled for the Long-faced variety long before they took leave of their babyhood. Medium-faces were a grand lot, and as usual produced many perfect birds, the first being a Silver Dun with good black beak; and the cup for Antwerps was awarded here. All the winners were cocks. The second and third Red Chequers. In *Tumblers*, Long-faced, the first was a Red Mottle, rather dun in tail; second to a Black Mottle, and third to a Black Bald, Mr. Dye showing a real good Black Beard. *Carriers* were a fair lot, but Mr. Horner's champion Dun cock, though winning first, was in a most woebegone plight; second and third were Blacks. *Dragoons*, though a large class, were not good with a few exceptions. *Turbits* were a fair lot, and the winners Yellow, Red, and Yellow. Only the winners in *Barbs* were of any note; but Mr. Mawson's Black cock, which stood first, was really grand, not one of the broadest, however, but one of the most perfect in all points. Second was a good Black, but younger, and third a Black almost worn out. In the Variety class Mr. Hawley won with an exquisite Black Mottle Tumbler; the second going to a Pigmy Pouter, and third to a Red Letz. There was some sharp work in the Selling class, some capital birds being shown, and quickly snapped up even before the Show was open, although after the time advertised for opening.

"AN EYE WITNESS" writes—The *Canaries* numbered 246 entries, and it would be a difficult matter to award the palm to any particular breed of birds, the representatives in each class mostly consisting of birds which have won prizes at previous shows. The competition having been close greater care had to be brought into play, but at about half-past two o'clock the last of the cards of distinction was attached to the cages. The morning was anything but good for judging. The Executive, Messrs. Longbottom (President), Pemberton (Vice-President), Fawcett, jun. (Treasurer), and Myers Mann (Hon.-Sec.), worked with a determination to make the Baildon Show of 1875 worthy of the promoters. We saw a few of the "fancy," not only in the show-room but at host Winterburn's, and had a good opportunity of judging of their enthusiasm in the cause of Canaries and Pigeons. Those who have visited Baildon of course knew more about the place than I did prior to the Bird Show. When I emerged from Shipley station I sought a "cabby," who happened to be there, and who conveyed me the better part of the way to my destination. After slowly ascending hill after hill for about two miles, he suddenly came to a dead stop, and refused to proceed an inch further. The last hill going into Baildon was a poser for "cabby," and the offer of another shilling would not tempt him to further proceed. However, I groped my way in the dark, through mud occasionally, until I got on to a pathway skirted by a lowish stone wall, overlooking a chasm about 15 or 20 yards deep, at the bottom of which water was flowing, as I could tell from the glare of a lamp shining upon the surface. A few minutes brought me to my roosting quarters—the "Malt Shovel," where I refreshed the inner man with the good things provided by a very pleasant landlady. Baildon by daylight gave a very different impression to the one I had the evening previous. From the various summits splendid views of the Yorkshire hills and valleys may be obtained, but the foggy atmosphere debarred me of that treat, which, perhaps, may be enjoyed the next time I may chance to visit the place. I filled up my time in another way—admiring the birds. It must have been the departure of the severe frost that caused the temperature in the bird room to be more genial to one's feelings. It could not possibly have been the fiery-coloured Norwich birds. It is not the first occasion I have seen such, but with all that there were other birds in the room, consisting of the Belgian, Manchester Coppy, Lizard, Yorkshire, Cinnamon, and the various Mule breeds, fit to grace the cages of the best of fanciers. In the competition for the "specials." Messrs. Hutton & Thackray (with thirty-one) took away the silver cup offered to the winner of most points; Mr. Adams winning the cruet, he being next up in points (twenty-eight). Messrs. Cleminson & Ellerton, Hawman, Bunting, Mackley, Belk, Cox, and Horme, were

amongst the most successful prizetakers. Messrs. Huttou and Thackray also won a special prize, a set of knives and forks, for the best bird in class 12 (Yorkshire Yellow). The bird was one of the best I ever saw, being in tip-top trim.

PIGEONS.

JACOBINS.—*Cock or Hen.*—1, T. Holt, Bradford. 2, W. Smallpage, jun., Colne. 3, S. Lawson, Preston. *vhc*, S. Lawson; W. T. Swallow, Northampton. *hc*, J. Thomson, Bingley; E. Horner, Harewood, Leeds. *c*, W. F. Jennings, Bradford; E. Horner; T. Holt; Ingham & Helliwell, Halifax.

POUTERS.—*Cock or Hen.*—1 and 3, J. Hawley, Girlington, Bradford. *vhc*, E. Horner.

FANTAILS.—*Cock or Hen* —1, Ingham & Helliwell. 2, J. Walker, Newark. 3, J. F. Loversidge, Newark. *hc*, J. F. Loversidge (2); J. Walker; J. Hawley. *c*, E. Horner.

OWLS.—*English.—Cock or Hen.*—1, J. Thresh, Bradford. 2, E. Rhodes, Great Horton. 3, W. Fawcett, Baildon. *vhc*, Ward & Rhodes, Otley; W. Ellis, Idle. *hc*, Ward & Rhodes; E. Mounsey, Low Moor; S. Lawson; H. Jennings, Allerton; Ingham & Helliwell. *c*, Cockett & Sunderland, Great Horton, Bradford; W. Wilkinson, Great Horton; A. McKenzie, Liverpool; E. Rhodes; H. Jenoings.

ANTWERPS.—*Short-faced.—Cock or Hen.*—1 and 2, J. Lister, Keighley. 3, W. Slater, Gravelly Hill, Birmingham. *vhc*, W. Ellis; H. Jennings. *hc*, E. Cootes, Burnley; E. Mawson, Leeds; Tordoff & Wilkinson, Wibsey, Bradford; J. Lister; W. Ellis (2); E. Horner; H. Jennings. *c*, E. Horner.

ANTWERPS.—*Long-faced.—Cock* —1, J. Lister. 3, D. Riddiough, jun., Bradford. *hc*, T. Hutton, Baildon; W. Ellis (2); J. Whitaker, Baildon; R. W. Pratt, Oxford. *c*, T. Bottomley, Great Horton. *Hen.*—1, W. Ellis. 2, H. Jennings. 3, E. Cordley, Idle. *vhc*, Cockott & Sunderland; Tordoff & Wilkinson; J. Bastow, Keighley; H. Jenoings. *hc*, W. Illingworth, Wilsden; E. Mounsey. *c*, Cockett & Sunderland; T. Bottomley; W. Illingworth.

ANTWERPS.—*Medium-faced.—Cock or Hen.*—1, H. Jenoings. 2, J. Hawley. 3, Tordoff & Wilkinson *vhc*, J. Lister. *hc*, J. Barnett, Baildon; Cockett and Sunderland; Clayton & Bairstow, Girlington; W. Ellis; J. Dyson, Guiseley. *c*, J. Rushworth, Keighley; W. Wilkinson, Great Horton; W. Ellis (2); T. Foster, Bingley; J. Dye, Hexham.

CARRIERS.—*Cock or Hen.*—1 and 2, E. Horner. 3, J. Thompson. *hc*, Miss F. Seanor, Leeds; E. Mawson, Leeds; J. Hawley; J. Holden, Bradford; Clayton and Bairstow. *c*, J. Holden; A. McKenzie.

DRAGOONS.—*Cock or Hen.*—1, E. Horner. 2, J. Rushworth. 3, T. Smith, Keighley. *vhc*, Ward & Rhodes; A. Holt, Bingley; R. Woods, Mansfield (2). *hc*, Ward & Rhodes; T. Smith; Cox & Robinson, Baildon; W. Whitaker, Cowling, Crosshills; Miss F. Seanor; R. Woods. *c*, Clayton & Bairstow; J. Wade, Silsden; J. Thompson.

TURBITS.—*Cock or Hen.*—1, E. Rhodes. 2, W. Wilkinson. 3, G. H. Poole, Bradford. *hc*, H. Wescoe, Harrogate; J. Thompson; J. Dye. *c*, Cockett and Sunderland; G. H. Poole; E. Horner; T. Foster.

TUMBLERS.—*Long-faced.—Cock or Hen.*—1, J. Hawley. 2, J. Dye. 3, W. F. Jennings *vhc*, D. Riddiough, jun. *hc*, D. Riddiough, jun. (2); E. Horner. *c*, J. Bastow, Keighley; J. Dye.

BARBS.—*Cock or Hen.*—1, E. Mawson. 2, J. Thresh, Bradford. 3, E. Horner. *hc*, Miss F. Seanor; J. Thresh. *c*, H. Wescoe.

ANY OTHER VARIETY.—1, W. G. Holloway, Shipley. 2, Miss F. Seanor.

SELLING CLASS.—*Pair or Single.*—1, D. Riddiough, jun. 2, Ward & Rhodes. 3, Clayton & Bairstow. *vhc*, T. Hartley, Keighley; J. Bastow; W. Fawcett, Baildon; W. Ellis (2); J. Thompsoo *hc*, J. Rushworth; J. A. Barnes, Gloncester (2); J. Lancaster, Baildon; T. Holt, Bradford. *c*, H. Crosley, Sale; J. Holden; J. Hutton, Baildon.

CANARIES.

BELGIAN.—*Clear Yellow or Ticked.*—1, Reed & Wilkinson, Great Horton. 2, R. Barrett, Crosshills. 3, Hutton & Thackray, Baildon. *vhc*, Reed & Wilkinson; E. G. Rossell, Brierley Hill. *hc*, W. Watmough, Otley Gill, Guiseley (2). *Clear Buff or Ticked.*—1, E. G. Russell. 2, Reed & Wilkinson. 3, T. Jobling, Middlesborough.

NORWICH —*Clear Jonque* —1 and 3, J. Adams, Coventry. 2, Orme & Ashley, Derby. *vhc*, Cleminson & Ellerton, Darlington. *Clear Buff.*—1 and 2, J. Adams. 3, Cleminson & Ellerton.

NORWICH.—*Even-marked Yellow or Buff* —1, G. & J. Mackley, Norwich. 2, Orme & Ashley. 3 and *vhc*, J. Adams. *Ticked or Uneven-marked Yellow or Buff.*—1, 2, and *vhc*. J. Adams. 3, Clemioson & Ellerton. *hc*, G. & J. Mackley; Cleminson & Ellerton.

NORWICH.—*Crested Yellow or Buff.*—1, G. & J. Mackley. 2, F. Woodward, Derby. 3, R. Hawman, Middlesborough. *vhc*, W. Howitt, Leeds; G. Cox, Northampton. *hc*, T. Thompson, jun., Bingley; F. Woodward.

COPPY.—*Yellow, with Clear or Grey Crest.*—1 and 3, Hutton & Thackrav. 2, G. & J. Mackley. *c*, Hutton & Thackray; Reed & Wilkinson. *Buff, with Clear or Grey Crest* —1, L. Belk, Dewsbury. 2, J. Garbutt, Great Ayton, Northallerton. 3, Overend & Spelding, Ravensthorpe. *vhc*, Hutton & Thackray (2); Reed & Wilkinson. *hc*, Hutton & Thackray.

LIZARD.—*Golden-spangled.*—1, 2, and 3, Cleminson & Ellerton. *vhc*, Reed and Wilkinson; S. Bunting, Derby; Hutton & Thackray. *hc*, M. Ballans, Dewsbury; Reed & Wilkinson. *c*, Holdsworth & Oliver, Harrogate; Hutton and Thackray. *Silver-spangled.*—1 and *vhc*, Hutton & Thackray. 2, S. Bunting. 3 and *hc*. Reed & Wilkinson. *c*, Cleminson & Ellerton.

YORKSHIRE.—*Clear Yellow.*—1 and 2, Hutton & Thackray. 3, Reed & Wilkinson. *vhc*, Holdsworth & Oliver; Huttoo & Thackray (3) *hc*, J. Horme, Armley; Overend & Spelding; G. & J. Mackley. *Clear Buff.*—1, 2, 3, Hutton & Thackray *vhc*, Hutton & Thackray; Reed & Wilkinson. *hc*, Hutton & Thackray; G. & J. Mackley.

YORKSHIRE.—*Even-marked Yellow.*—1, J. Horme. 2, L. Belk. 3, W. & C. Burniston, Middlesborough. *vhc*, Hutton & Thackray; Reed & Wilkinson. *c*, Reed & Wilkinson. *Even-marked Buff.*—1 and 2, R. Hawman. 3, Reed and Wilkinson. *vhc*, Reed & Wilkinson; L. Belk. *hc*, Hutton & Thackray. *c*, Overend & Spelding.

YORKSHIRE —*Ticked or Uneven-marked Yellow.*—1, J. Garbutt. 2 and 3, Hutton & Thackray. *vhc*, Overend & Spelding. *Ticked or Uneven-marked Buff.* —1, Reed & Wilkinson. 2, J. Garbutt. 3, Hutton & Thackray. *hc*, W. Best, Batley; Hntton & Thackray; Overend & Spelding.

CINNAMON.—*Jonque.*—1, 2, and *vhc*, J. Adams. 3 Cleminson & Ellerton. *hc*, G. Cox. *Buff.*—1, 2, and 3, J. Adams. *Marked or Variegated.*—1, G. Cox. 2, J. Adams. 3, L. Belk. *hc*, Hutton & Thackray; W. & C. Burniston; T. Tenniswood, North Acklam, Middlesborough. *c*, Hutton & Thackray; Reed and Wilkinson.

SELLING CLASS.—1, Cleminson & Ellerton. 2, J. Bexson, Derby. 3, J. Cawood, Baildon. *vhc*, J. Bexson. *hc*, T. Thomson, jun.; J. Adams; Cleminson and Ellerton; J. Bexson; Hutton & Thackrav.

MULES.

GOLDFINCH.—*Clear or Variegated* —1, Hutton & Thackray. 2, S. Bunting. 3, R. Hawman. *vhc*, Cleminson & Ellerton; T. Tenniswood. *hc*, J. Mount, Lancaster; R. Parker, Windhill; L. Belk.

GOLDFINCH.—*Dark* —1 and 3, R. Hawman. 2, G. Cox. *vhc*, G. & J. Mackley. *hc*, Cleminson & Ellerton; S. Bunting.

LINNET AND CANARY —1, 2, 3, and *vhc*, Hutton & Thackrav.

ANY OTHER VARIETY.—1 and 3, Hotton & Thackray. 2, R. Hawman. *hc*, T. Tenniswood.

BRITISH BIRDS.

GOLDFINCH.—1, G. Cox. 2, R. Hawman. 3, Cleminson & Ellerton. *vhc*, C. J. Bamber. *hc*, Cleminson & Ellerton; W. & C. Burniston (2); S. Bunting.

BULLFINCH.—1, J. Horme. 2, Cleminson & Ellerton. 3, C. J. Bamber. *vhc*, W. & C. Burniston; R. Pearson.

BROWN LINNET.—1, S. Bunting. 2, J. Bage, Middlesborough. 3, Cleminson and Ellerton. *vhc*, R. Hawman; J. Bage; H. W. Bachelor, Whitby. *hc*, T. Tenniswood; R. Pearson; Hutton & Thackray.

ANY OTHER VARIETY.—1, J. Hall, Windhill. 2, R. Pearson. 3, J. Walker, Baildon. *hc*, W. Robert, Shipley.

PARROTS, OR ANY OTHER VARIETY OF FOREIGN BIRDS.—1, S. Bunting.

LOCAL CLASS.—1, 2, and 3, W. Wray, Westgate, Baildon. *vhc*, E. Goodall, Baildon.

JUDGES.—*Pigeons :* Mr. Cannan, Bradford. *Cage Birds :* Mr. Barnesby, Derby.

NATIONAL PERISTERONIC SOCIETY.—The annual Show of this Society will take place at the Crystal Palace on Tuesday next. The members have greatly increased during the last year, and a great show is anticipated.

RABBIT HUTCHES.

IN my opinion all systems of drainage, slanting floors, holes in the backs of hutches, grooves, and so forth are ineffectual. Sooner or later the floors become foul and unhealthy. The most ingeniously arranged canals for conducting away the refuse from the hutches are always liable to become choked up, and as a matter of fact very frequently do. Why not have the floors of the hutches made of stout galvanised wires half an inch apart, on the same principle as that adopted in parrot cages? With a liberal allowance of litter there would be no fear of "sore hocks," and no harbour would be given for damp or vermin. Below the floor should be placed a zinc tray the exact size of the hutch, to collect the droppings. The principle is old enough. Cowper in the management of his three immortalised Hares, says (I quote from memory), "The floors were so arranged as to allow all ordure to pass through," and a floor of wooden bars has been recommended by more than one writer on the subject; but the superior cleanliness and efficiency of galvanised wire must be apparent. The labour, too, of cleaning under this system would be reduced to a minimum. All that is required is to "shake the bed" well every morning, add a wisp of fresh litter, empty the tray, sprinkle a little disinfecting powder upon it, and replace it under the hutch; or a few seconds more would suffice to thoroughly sluice it with water, and dry with a cloth, which would bring about a better and more business-like result. A few handfuls of sawdust placed in the tray each day would, I fancy, be an improvement.

Thus, where several hutches are in use, what would be under the old system a dirty half-hour's work would be accomplished in five minutes without so much as soiling the fingers. Indeed, the daintiest of damsels need not shrink from attending to her pets herself under such circumstances. It would be advisable, though, to retain the boarded floor in the doe's private retiring room, as everyone who has kept Rabbits knows that, however self-abnegatory and thoroughly she may have "feathered her nest," her obstinate family are sure to pertinaciously work their blankets up into a wall all round them, and contentedly repose on the bare boards. A well-behaved doe also is generally careful not to defile her nursery.

I have not tried this plan, but I intend to do so some day. It is a theory, but one born of very unpleasant memories of hutches with all sorts of complicated drainage works. Simplicity carries the day in greater undertakings than Rabbit-keeping.

I do not keep Rabbits now, but I hope to resume the pursuit when circumstauces will permit, in addition to poultry and Pigeons. I have drawn out plans for a combined establishment to fit the end of a back garden, which is quite a multum-in-parvo in its way, and I intend forwarding them to this Journal, in the hope that they may originate a hint or two to those who, like myself, find that this "wicked Journal," with its numerous departments, makes them wish for a practical interest in each, but who have only a small space in which to "have their fling."

Can anyone enlighten me as to the advisability or otherwise of using dried fern (common bracken) as a litter for Rabbits? It would be everything that could be desired as regards softness, but would it injure them if (as of course they would) they were to eat it? They are tolerably omnivorous—*e.g.*, I very distinctly remember an old buck Rabbit of mine, who on different occasions in an eventful life made apparently satisfactory meals of sawdust, a piece of pewter, and some putty. The same animal was also a critical judge of cigars. I can collect any quantity of fern here (near Epping Forest) in the autumn, and if suitable as a substitute for straw, it would effect a considerable saving.—SCIOLIST.

HOW TO DISPOSE OF OUR HONEY.

HONEY—luscious honey—is generally a treat to our little ones for their breakfast, tea, or supper, in place of butter, and nice and wholesome it is too, as well as an agreeable change; but, unlike bread and butter, they soon tire of it, so it is only as a treat that it can be consumed in that way. To the buyer of 10 lbs. or 20 lbs. this does not matter, but were we to keep our own bees, and our little friends supply us with the delicious commodity

by the hundredweight, then an important question arises—How to dispose of our honey? Naturally the answers comes—Sell it. Very good, but first a customer must be found, and we do not all like to turn hawkers without a license; so now I suggest we should take a lesson from our neighbours of the continent, who have many ways of using honey to please all palates. Almost contemporaneous with our Crystal Palace Exhibition were held at Paris and Copenhagen gatherings of a similar character, and, in addition to most of the exhibits that were shown here, appeared a long list of eatables and drinkables made wholly or partly with honey, which would be very welcome on the tables of our own land. Taking the Paris catalogue I see here were shown honey bread, spiced bread, fruits preserved in honey, jellies, sweetmeats, cakes, bonbons, pastiles, and chocolates; whilst for eau de vie we need not leave old England, seeing it is to be made both from honey and wax! Then we have hydromel or metheglyn, champagne, red and white wines, liqueurs, fruit syrups, vinegar, and fruit cordials. There is a pretty list of delicacies for our housewives to exercise their ingenuity and skill upon! and I trust the result will be, I shall be able to see and taste many of the above at our next British Bee-keepers' Show, and the prizes will be offered for such classes. I think last year they must have been clean forgotten, but notwithstanding which a half-dozen bottles of metheglyn made their appearance, which were generally distributed amongst the Committee, and one having fallen to my share I can truly say it was fine; and my friends say the only fault about it is, you cannot drink much of it—perhaps that is lucky.

Regretfully I say I have no instructions how to make these good things, but perhaps among the multitude of our readers others are more fortunate. If so, by all means let us have the recipes in good time to utilise for our next Exhibition.—JOHN HUNTER, 5, *Eaton Rise, Ealing.*

ECONOMICAL HIVING.

I AM only a cottager, but very fond of bees. Mr. Pettigrew is a great advocate for his large straw hives. I quite agree with him that a large hive is better than a small one. I have now seventeen stocks of bees—ten in straw hives and seven in boxes, four of which are in tea chests, two in boxes made by a carpenter, and one in a rough box which will hold three pecks, or nearly a bushel. They were so heavy at the close of the honey season one could scarcely lift them, but I must say that the box, being rather a rough and large one, adds more to the weight. Now as to the tea chest: I keep all my bees in bee houses, and three of those in tea chests are well wrapped-up with hay, and one with old carpet and wadding. My boxes and tea chest have (all but one) three holes on the top covered with perforated zinc, one or two of which I leave open for ventilation, with a glass or small straw hive over.

In the Journal of November 5th, page 416, "R. S." says that he has a hive or box, or packing case (as he calls it) in his apiary which he has had in constant use for ten years, and made from wood only half an inch thick, and answers very well. Now, if this box answers well which is made from wood half an inch thick, I feel that the tea chest will answer quite as well. The wood is very hard, they can be bought for 3*d.* or 4*d.* each, which would be a great advantage to the poor man. I do not say they will do for outdoors, but in a house I think they will answer very well with care in the winter. I have two in tea chests which have stood two winters and are all right up to the present time. I put some bands on the edge of my tea chest of thin iron hooping to keep them together in case the nails should give way.—T. G.

DR. SANDFORD *versus* SECRETARIES OF CRYSTAL PALACE.—Dr. Sandford sued the Secretaries of the Crystal Palace Poultry Show for return of entries and expenses. This was heard on Tuesday last at the Westminster County Court, and resulted in a verdict for the defendants with costs. Particulars will be given in our next number.

TO OUR READERS.

ALTHOUGH we have a double Supplement we are obliged to omit several prize-lists and communications, although in type.

OUR LETTER BOX.

SEBRIGHT BANTAMS FOR SCOTLAND (*R. McG.*).—Sebright Bantams will stand any climate in the British Islands. The Golden are easier to breed than the Silver. Both are equally hardy. The difficulty in breeding them is, that many of the cocks are at fault, and for the same reason it is seldom satisfactory to buy eggs.

POULTRY ACCOUNT BOOK (*Fly-catcher*).—There was such a book published but we suppose it was given up, as it is not advertised.

CALL DUCKS FOR EXHIBITING (*Call Duck*).—We know few birds more attractive or more admired than good Brown Call Ducks, and they are seldom overlooked. They breed better and pay better than the strictly fancy birds that have little but their beauty to recommend them. Brown are preferred to White always. They must have water enough to swim in.

CANARIES IN AN ENCLOSED SPACE OVER A SHOP DOOR (*Groundsel, Ireland*).—The place wherein you keep your birds is certainly a very nice and cheerful position both for the birds and your pleasure. Desiring to enjoy an uninterrupted view of the ways and doings of your Canaries during the breeding season, you need not labour under any misapprehension that the birds will not breed if the cages are entirely taken away from the small room over the doorway. A couple of pairs of Canaries would amply suffice for the 4-feet space in length by 18 inches wide. Divide the place either with a sheet of glass or a skeleton wire partition, keeping each pair of birds apart during incubation, or there might, perchance, be a row in the house. The seven Canaries would be too thick upon the ground. When the proper season comes the birds will no doubt very readily pair, although they are in company together at the present time. The hens will of necessity take to their former holes or cavities in the walls (more especially if neither nest box nor basket be supplied), although the cages you mention may be removed. There is at all times a chance of birds quarrelling if kept together, whether in or out of cages, and we would rather the quarrel take place in an open space than in close quarters. There is every probability of some of the birds successfully pairing and breeding. The state of happiness you say they are now enjoying, accompanied with buoyant health, are signs that harmony will continue to reign in their household. Song will be a matter of secondary consideration. It is much too soon for the hens to begin breeding, therefore do not supply them with building materials until March. By all means keep the cock Robin apart from the Canaries during the breeding season. If you require Mule birds pair a cock Goldfinch to a hen Canary; but do not indiscriminately mix up a male and female Goldfinch with your Canaries during breeding time. Goldfinches are generally very mischievous with nests and eggs; of course there are exceptions. A three-year-old Goldfinch hen will more likely breed with a cock Canary than the cock Goldfinch (caught last harvest) will with a hen Canary. Get a two or three-year-old Finch if you wish to be successful in Mule-breeding.

BOOKS (*J. D. W.*).—A new edition of Mr. Pettigrew's book on bees will be shortly published by Blackwood & Sons.

REMOVING STOCKS (*Unfortunate*).—There will be no difficulty found in the removal of your hives from their present position to the other on the south side of the Thames. No danger at this time of the year from suffocation or overheating. Their doors should be closed (ventilation is not necessary in winter), and the hives well secured to the boards by string or nails. Put them separately on a light cart (or one with springs), or into a railway carriage, and they will travel safely any distance. If the two positions are close to the river, and nearly opposite each other, the hives may be taken across by a boat, using a hand-barrow on either side. If they have to go round by London send them by railway.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

DATE.	9 A.M.					IN THE DAY.				
1875. Jan.	Barometer at 32° and Sea Level.	Hygrometer. Dry.	Hygrometer. Wet.	Direction of Wind.	Temp. of Soil at 1 foot.	Shade Temperature. Max.	Shade Temperature. Min.	Radiation Temperature. In sun.	Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 13	30.101	47.7	47.0	S.W.	41.7	49.8	45 2	59.8	41.1	0.075
Th. 14	30.061	49.9	49.2	S.W.	42 2	52.1	46 0	51 8	42.5	0.012
Fri. 15	29 890	47.2	46.2	S.	43.9	51.8	46.2	68.7	44.1	0.116
Sat. 16	29.595	46.2	46.2	N.W.	43.5	51.0	44.8	64 2	40.7	0.058
Sun. 17	29 727	47.5	46 8	W.	43.1	48.8	43.9	49.4	40.4	0.254
Mo. 18	29.761	51.9	51.1	W.	43.5	53.8	45.2	57.2	41.2	0.054
Tu. 19	29 893	48 9	46.9	S.W.	44.0	52 5	46 4	61.4	43.1	0.120
Means	29.861	48 4	47.6		43.1	51.4	45.8	58.9	41.9	0.689

REMARKS.

13th.—Warm but damp and dark all day.

14th.—Showery during the whole day; very warm at night.

15th.—Another dull morning, but soon clearing off, was fine from 10 A.M. till noon; rainy and dull afternoon; but a fine night.

16th.—Showery till noon, then fine for four or five hours, when rain again fell, making the evening very damp.

17th.—Fine till about 1 P.M.; showery afternoon; but fair in the evening.

18th.—Rainy morning, and more or less rainy all day, in fact a regularly dark, damp, disagreeable day.

19th.—Very windy during the past night, and rather so all day, but much lighter and finer than the day or two preceding it. A little rain at night. Heavy gale commencing about midnight.

A dark damp week, the mean 9 A.M temperature 13° higher than the week before last. Ground saturated by continual slight rain, and damp atmosphere. —G. J. SYMONS.

COVENT GARDEN MARKET.—JANUARY 20.

WE have nothing fresh to report, supply and demand being about balanced. The provincial markets remaining quiet, very few orders being on hand.

FRUIT.

		s.	d.		s.	d.
Apples	½ sieve	1	0	to 1	6	
Apricots	doz.	0	0	0	0	
Cherries	℔ lb.	0	0	0	0	
Chestnuts	bushel	10	0	20	0	
Currants	½ sieve	0	0	0	0	
Black	do.	0	0	0	0	
Figs	doz.	0	0	0	0	
Filberts	lb.	1	0	1	8	
Cobs	lb.	1	0	1	6	
Gooseberries	quart	0	0	0	0	
Grapes, hothouse	lb.	4	0	8	0	
Lemons	℔ 100	8	0	12	0	
Melons	each	1	0	8	0	
Mulberries	℔ lb.	0	0	to 0	0	
Nectarines	doz.	0	0	0	0	
Oranges	℔ 100	4	0	10	0	
Peaches	doz.	0	0	0	0	
Pears, kitchen	doz.	2	0	3	0	
dessert	doz.	2	0	4	0	
Pine Apples	lb.	2	0	5	0	
Plums	½ sieve	0	0	0	0	
Quinces	doz.	0	0	0	0	
Raspberries	lb.	0	0	0	0	
Strawberries	℔ lb.	0	0	0	0	
Walnuts	bushel	10	0	2	0	
ditto	℔ 100	1	0	16	0	

WEEKLY CALENDAR

Day of Month	Day of Week.	JAN. 28—FEB. 3, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m. h.	Sun Sets. m. h.	Moon Rises. m. h.	Moon Sets. m. h.	Moon's Age. Days.	Clock before Sun. m. h.	Day of Year.
28	Th	Agardh died, 1859, æt. 74.	45.8	30.8	38.3	47 af 7	40af 4	morn.	10af 10	21	13 15	28
29	F		45.6	31.5	38.5	45 7	42 4	46 af 0	23 10	☾	12 26	29
30	S	Partridge and Pheasant shooting end.	44.7	32.2	38.5	44 7	43 4	59 1	37 10	23	13 35	30
31	Sun	Sexagesima.	44.9	30.9	37.9	42 7	45 4	12 3	58 10	24	13 34	31
1	M		44.4	32.0	38.2	41 7	47 4	25 4	26 11	25	13 52	32
2	Tu		44.6	31.5	38.0	39 7	49 4	34 5	after.	26	14 0	33
3	W	Hartweg died, 1871.	45.0	30.7	37.9	38 7	51 4	32 6	2 1	27	14 6	34

From observations taken near London during forty-three years, the average day temperature of the week is 45.0°; and its night temperature 31.3°.

PEACH FORCING.

IT must be said, though it were superfluous to repeat what everybody knows, the Nectarine requires the same treatment as the Peach, and in no way that I know of do the two differ, except that the Peach has a downy skin and the Nectarine a smooth one, yet the flesh and flavour are dissimilar. Peaches diverge occasionally into Nectarines—*i.e.*, a Peach tree produces fruit with downy and smooth skin, or Peaches and Nectarines; but an instance of a Nectarine producing fruit with downy skin is not, I think, recorded. From the stone of a Nectarine a tree has arisen producing Peaches, but this does not throw any light upon the origin of the Nectarine, which I consider only a variety, as pointed out in Dr. Hogg's "Vegetable Kingdom," page 299, "distinguished," says the author, "by the name of Amygdalus persica lævis; . . . and there can be no doubt that it originated in a mere freak of nature, as we have seen instances of Nectarines being produced on the branch of a Peach tree without having been budded." It is clearly a variety due to culture, and one, like those of most other fruits which in variety of the originals have the saccharine juice most highly developed, are smaller in size. Peaches attain to 12 inches in circumference, but it is a magnificent Nectarine of which the girth is 10 inches. I have an Early Alfred Peach which the past three seasons has borne only Nectarines some 10½ inches in circumference. Can it be that the Plum stock exerts an influence over the Peach scion, causing the fruit to partake partly of the nature of the Plum and partly of the Peach, resulting from working upon a foreign stock? When was the Plum first used as a stock for the Peach? Were they first introduced upon their own roots, the Almond, or Plum?

In forcing the Peach the house is a consideration of no mean importance. For early forcing there is nothing surpassing the old lean-to with a good substantial back wall. The wall, whatever may be said against its expense, is a great absorber of heat and moisture, and reservoir of the two. The wall absorbs heat when it is colder, and moisture when it is drier than the atmosphere it is presented to, and gives them out again when the atmosphere is colder and drier. It also catches the sunbeams, and when not them, light whenever there is any, for the foliage of trees rarely is so dense as to obscure the back wall from the sun's influence; and the rays of light by the wall are reflected back into the house, just as the angle of incidence shall determine. The lean-to, at least its back wall, is not nearly so sudden in its changes from cold to heat, or the contrary, as glass, which is the best of all for allowing a heated atmosphere to be cooled by external cold. The back wall will not be of any use for Peach trees, as the roof will be occupied by trees planted in front, and though they grow, will not fruit satisfactorily. A house of about 9 feet width over all, and 12 feet of back wall, will answer, and give about 10 feet of trellis in height. This kind of house (fig. 16) wastes 2 feet of the back wall (upper part), as we have only 10 feet of trellis, but 12 feet of wall. "The trees might as well be against the back wall," I have no doubt some may suggest, "and have the front fitted with shelves—not so high as to obstruct the light to the trees on the wall—for Strawberries, &c. It is only reasonable!" But it ain't. Forced Peaches, forced anything wanted to flower and

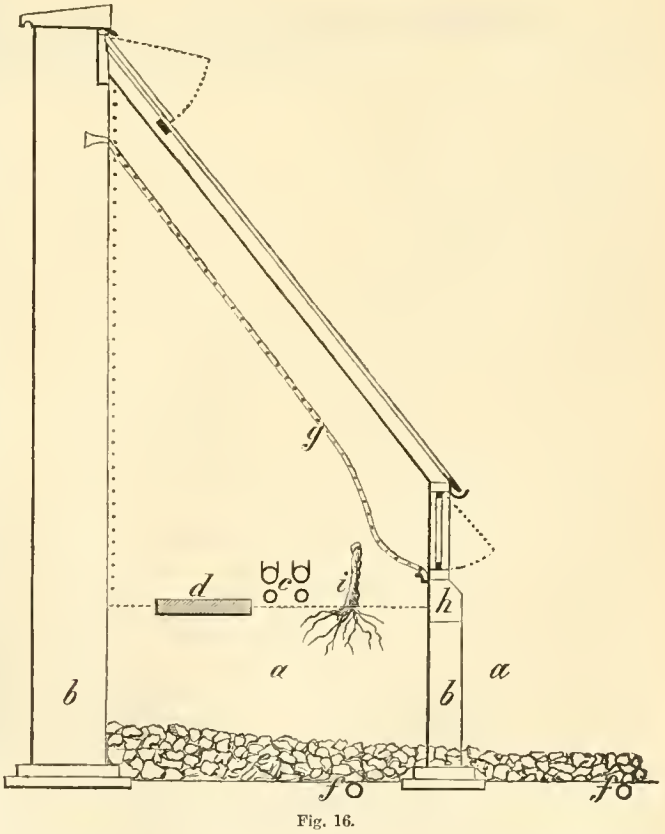


Fig. 16.

fruit, does not want to be 6 feet or more from the glass, but as near thereto as is consistent with the prevention of the leaves scorching and the avoidance of chills. If too near the glass the leaves are liable to be blistered or scorched when the sun's rays are powerful and the leaves wet; and there is danger of chills when the trellis is

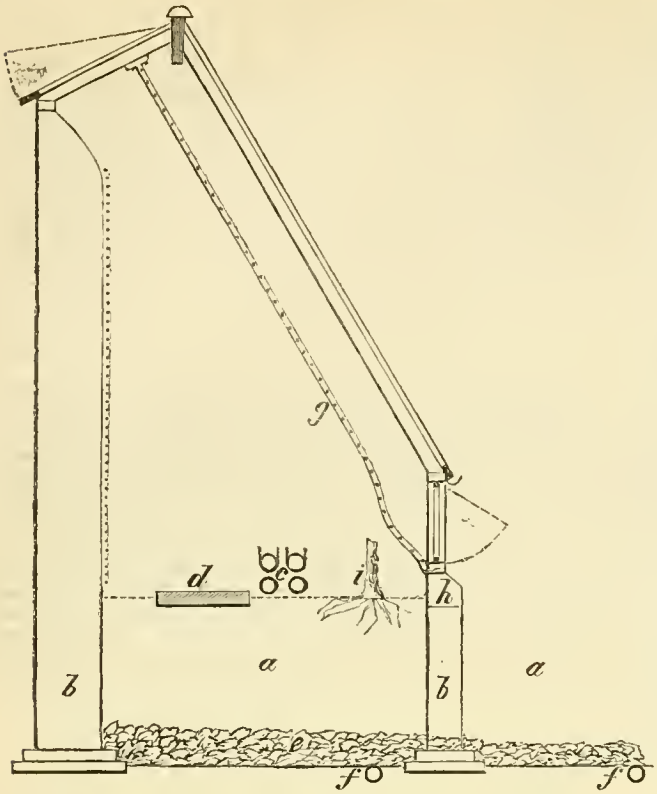


Fig. 17.

near the glass in case of sudden frost, with danger also from condensed moisture during the flowering period. Experience prompts my naming 15 inches from the glass as the best distance for early forcing, and for crops which are not expected to be ripe before July any distance from 15 inches to 3 feet is suitable, but at a greater distance than 3 feet they answer for later crops; the main thing is to afford the foliage unobstructed light, and they then do well at a greater distance, and when but little artificial heat is employed; but for early work the growths require to be made near the glass, for when made at a distance from it the shoots are liable to be drawn, and the foliage thin in texture, which results in single instead of triple buds, and those formed being very liable to drop.

The best material for the trellis is iron, having guiding bars of flat bar iron—one to each rafter, and pierced with holes 6 inches apart for the wires to pass through, with angle iron at the ends, and also pierced with holes for the wires, the ends of the wires threaded, and the wires tightened with brass thumb-screw nuts. The angle iron may be 1¼ inch each way and three-sixteenths of an inch thick, and the bars three-quarters by a quarter inch thick; when practicable secured to the woodwork of the house, as they may in front trellises to the wall plates and rafters; whilst the back-wall trellis stage may be let into the wall, and secured by cement. The curved trellises may have the stays let into stones on pillars, and cemented-up. The best kind of wire is the annealed; galvanised does not answer so well as the plain, and this does not appear injurious. Were better-finished iron employed for galvanising it is likely any objection would disappear; but in its present rough state minute particles sticking up along its surface, and causing gum or canker in every shoot pierced by those particles, it is not to be recommended. The drawn annealed wire is much more evenly finished, and is stronger than rolled wire, which from its cheapness is most commonly used. Drawn annealed wire is best for trellises under glass, and for a Peach trellis No. 8 gauge, which is about 509 yards per hundredweight, and this should be thoroughly painted, three coats at least, of white-lead paint, as well as the other ironwork of the trellis.

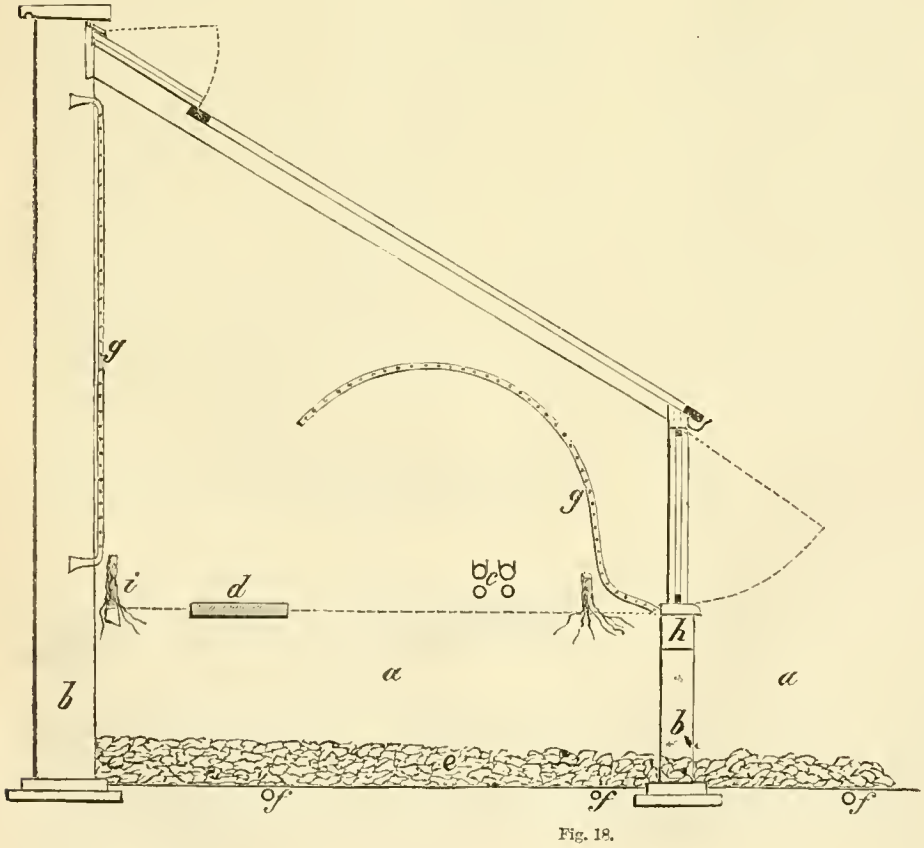


Fig. 18.

There is nothing better for constructing the house than wood. To sound well-seasoned red deal there is no objection, and this we advise for the woodwork. Lights, especially moveable ones, are going out of date. It is, however, a mistake for Peach houses to dispense with them. All the glass portion of the roof should be moveable except the ventilation part and front lights, so that the trees may when at rest be fully exposed to the weather, and especially those houses which are calculated to give ripe fruit in April up to July. Great benefit accrues from the exposure of the trees to the weather, particularly those ripening their fruit off at an early season. The exposure is a great destructive of red spider and complete annihilator of brown scale; besides,

the borders and trees are much benefited by the autumn rains, and trees so subjected appear to thoroughly enjoy the process, as their buds do not drop, and are so bright and plump. Besides, when the house is closed the trees seem to be more readily excited, and so good is the treatment that I advise its practice.

In the matter of glass, 21-oz. sheet, thirds quality, answers, and in large squares, but not wider than 15 inches, and having narrow laps so as to prevent water getting between the glass at the laps. We have squares 30 to 40 inches long and 15 inches wide of 26-oz. glass, thirds, on the roof of Peach houses, with 3-16th laps, which have not had a square broken by frost in four years. The thicker the glass the greater certainty of maintaining a more equable temperature, as thick glass does not allow of the atmosphere being cooled so quickly as thin. Cheap thin glass is false economy.

The front walls of Peach houses should be constructed so as to admit of the roots passing outside, affording them an inside and an outside border. This may be effected by having the front walls built on pillars 14 by 9 inches, with 2 feet or 2 feet 6 inches clear space between. The spaces for affording support to the wall-plates may be arched over if the wall is to be taken up in brickwork, but if stone is procurable a stone head is preferable; it may be 10 inches deep and the thickness of the wall, and in length so as to reach midway of each pillar. A stone heading allows of the roots passing outside at less depth than the arches, and the spaces are greater.

A brief allusion to the sections may now be made. Fig. 17 differs little from fig. 16, but has a sort of span roof, which admits of a higher trellis. The dotted lines against the back wall show the usual position of trees in such houses, and to which there may be no objection if the trees are not required for early forcing.

Fig. 18 is also a lean-to and wider than figs. 16 and 17, with a trellis against the back wall and one in front of the house, and curved, so that the foliage of the front trees may not obstruct the light to the trees against the back wall. This house being wider, having a flatter roof than figs. 16 and 17, and less piping, is not suitable for very early forcing. The trellises being at greater distance from the glass, is a disadvantage for early work; but the fruit may be ripened very satisfactorily in such houses in early June.

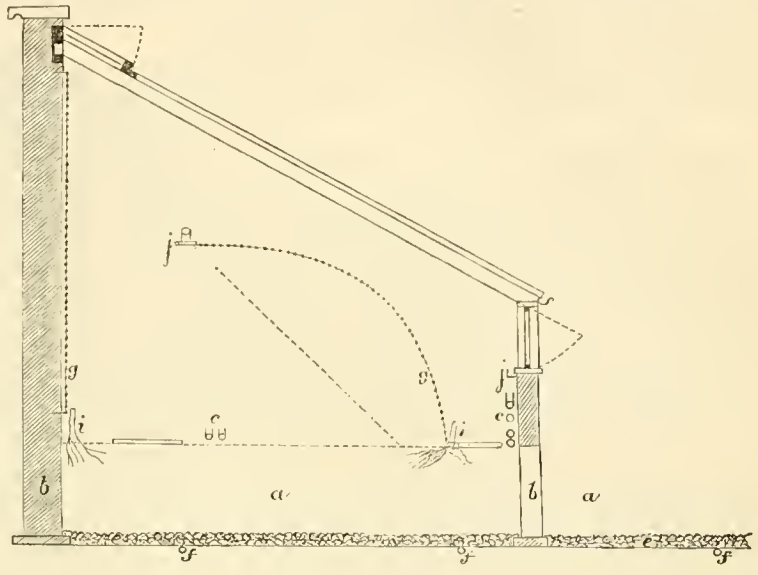


Fig. 19.

Fig. 19, also a lean-to, but considerably wider than the three preceding, having a walk back and front, two trellises, a front one and the other against the back wall—arrangements admitting of ready access to the trees. A curved front trellis is shown, but sometimes a flat one is employed, as indicated by the dotted lines under the curved one, which is only space wasted, besides causing the foliage to be a greater distance from the glass. It is shown heated by six rows of 4-inch pipes, which are desirable to have fruit ripe in June, but, if not wanted ripe before July, four rows will be sufficient.

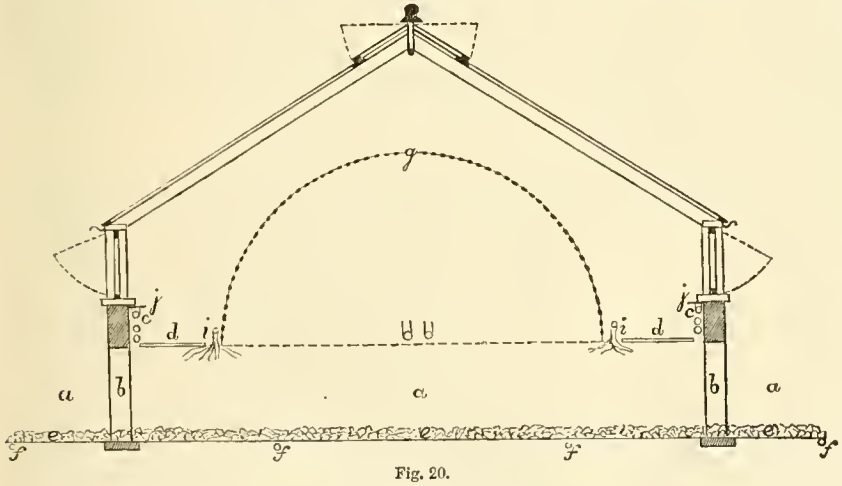


Fig. 20.

REFERENCES TO ALL THE FIGURES.

a, Border 3 feet deep, and both inside and outside the house.
b, Back and front or side walls.
c, Hot-water pipes, the two upper troughed for holding water for evaporation.
d, Pathway of laths, or flags, or iron gratings.
e, Drainage.
f, Drains, which require proper fall and outlet.
g, Trellis of annealed wire, and well painted. No. 8 is most suitable.
h, Stone head crossing the pillars, and spaces admitting of the roots passing outside.
i, Indicates where the trees are planted.
j, Shelf for Strawberries.

The scale of figs. 16, 17, and 18 is quarter-inch to 1 foot, and figs. 19 and 20, 8 feet to 1 inch.

Fig. 20 is a span-roof, and about 24 feet wide, with curved trellis, a pathway along both sides, and it is heated by eight rows of 4-inch pipes, so as to give fruit in June.

These houses have all top and front ventilation, than which Peaches can hardly have too much provided for, and the upper pipes are fitted with evaporation troughs. The borders are shown efficiently drained, and are selected as most suitable for their purpose. Others there may be equally good, probably better, of which I should be glad to hear, but I have a decided objection to those which have shelves in every conceivable place for accommodating Strawberries, though I have shown them in figs. 19 and 20. Strawberries are very acceptable no doubt, and if they can be had without incommoding the Peach trees the objection ceases; but they happen to flower and ripen their fruit when we want to syringe the Peach trees, and they are rarely introduced without bringing-in red spider, and do not go out without leaving it behind, for it is hard to tell which the red spider is most partial to, the Strawberry or Peach.—G. Abbey.

Climbing Roses.—Your contributor, "Tucker," writing on

climbing Roses, says that he has given up growing climbing Devoniensis and climbing Victor Verdier, two of the best climbing and pillar Roses we possess. The former covers the larger part of the front of my house (not ten miles from London), and the beauty of its chaste cream-coloured blossoms before full expansion baffles description, to say nothing of its handsome foliage, so generally healthy and free from blight. Again, why does your correspondent omit Cloth of Gold from his indoor climbers? It is absolutely without a rival in a Rose house. If he wants crimson flowers, let him procure Messrs. Veitch's charming new Tea Rose Duchess of Edinburgh.—H. K. M.

VERONICA SERPYLLIFOLIA A SUBSTITUTE FOR LAWN GRASS.

A REALLY good substitute for grass would certainly be a great boon to many, especially to amateurs with small grass plots closely studded, as these often are, with flower beds.

Some fifteen or sixteen years ago the days of the "dewy grass" were thought to be numbered, and Spergula pilifera was to reign in its stead. In some nurseries it was cultivated almost by the acre, and immense quantities of it sold, but now the nasty weed is seldom seen. At that time I was in a large garden near Edinburgh, where it was tried in various ways, and we were kept dibbling, watering, and weeding Spergula until it became a settled conviction with us youths that our worthy chief had spurrey on the brain; but nothing came of it, or rather the grass came, and the scythe and the mowing machine went on as before.

In small nooks and corners grass is doubtless sometimes very troublesome, and unless these be kept equally as well as the more accessible parts, the neatness and beauty of the whole is considerably marred, and for such places I would strongly recommend a trial on a small scale of Veronica serpyllifolia.

This little plant is said to be a native, although I do not know it as such, and it may not be so well known to all but that a short description of it may be acceptable. It is a low, spreading, dense-growing plant with leaves, as its name implies, very much resembling those of the common wild Thyme, Thymus Serpyllum, only of a brighter fresher green, and much more closely set upon the stems. On light soil in a common herbaceous border it seldom grows higher than about an inch, its creeping stems rooting at every joint, and a patch of it the size of a crown planted in spring will cover a square foot of ground by the end of the season. In May and June it is thickly covered with white flowers faintly tinged with pale blue, which scarcely rise half an inch above the plant. Were its season of blooming not so very brief it would long ago have won itself a name among the best of carpet bedders. It bears treading and rolling well, though certainly not to the same extent as grass. Except on rockwork I have not seen it suffer from drought, but it does best on a moderately damp soil.—R. D. TAYLOR.

HARDINESS OF CORDYLINE INDIVISA.

Is it generally known that Cordyline (Dracæna) indivisa is a hardy out-of-door plant?

I saw last summer in Messrs. Jackmans' nurseries at Woking several plants standing in a row, and was told they had been there without protection for six or eight years. I was struck by their beauty, luxuriance, and tropical appearance. As a decorative plant for standing in isolation on lawns I cannot imagine a better. A few days since I drove to Messrs. Jackmans', and was told that the Dracæna was unharmed by the severe frosts we have lately experienced.

My interest lies greatly in the beautifying of grounds, &c. I am anxious to rake up any hardy ornamental plants and shrubs suitable for conspicuous positions, of which Dracæna indivisa is certainly one.—HENRY W. COOPER, F.R.H.S.

CULVERWELL'S PROLIFIC MARROW PEA.—My object in writing is not to write-up the above Pea, but to advise those who intend to grow it to try it for general use, as I see it is advertised in your columns merely as a late Pea. Having had the opportunity of seeing it growing last season I can recommend it as the Pea for everyday use, particularly to those who have a large supply to produce from a limited space. It is just the Pea to take the place of the well-known Champion of England. These thoughts must have suggested themselves to many other garden visitors to Thorpe Perrow as well as to myself as they looked down the magnificent rows of this Pea grown by Mr. Culverwell, who grows it not only as a late Pea, but as the Pea for everyday use. The photograph shows its bearing qualities, the pods being large and well filled with monster peas—in fact, to my mind it is a giant Veitch's Perfection.—THOMAS KEETLEY, *The Gardens, Newton House.*

TRANSPLANTING VINES.

MR. WRIGHT expressed a desire to hear the result of my experiment as regards the fruiting of the Vines, the transplanting of which was described in the numbers of your periodical of October 9th and 16th, 1873.

Last season (1874) the Vines were all that could be desired, making vigorous growth, and producing a sufficient number of moderate-sized bunches, with berries as large as I have ever seen in a cold vinery (such as mine), and scarcely to be surpassed in colouring, bloom, and condition.

I am not ambitious of cultivating the "sensational bunches for exhibition purposes" of which Mr. Wright speaks, but I should thank him much if he would fulfil a hope which he gave us some reason to entertain, by giving directions for the formation of his *beau ideal* border, such as would produce at least sensational berries, say of the size of an Orleans Plum; but probably the two things go together. Mr. Wright's system of incorporating charred vegetable matter with the border is, I am sure, excellent. The virtues of that dressing are proved in an early number of the *Cottage Gardener* by Mr. Barnes of the Bicton Gardens. I had not such materials at hand, or I should gladly have used them. Liquid manure has a powerful effect. In the better days of guano I tried it with potted Vines; the growth, marked on the wall, was sometimes 1½ inch in twenty-four hours, if not more.

Mr. Wright's recommendation regarding fire heat is good. The ripening of the wood has always been a great point with me. I hope this year to introduce hot-water pipes into my vineries, which have hitherto been without them.

Lastly, I mentioned the failure of my Grapes in the house before the Vines were transplanted. The chief cause, I have no doubt, was that the roots were inside the house, and that the watering of these, especially if followed by sunshine, made the berries crack, and covered them with oïdium before they even changed colour. Since the Vines have been planted outside not a single berry has cracked or failed to ripen well.—ROBERT BLACKBURN.

OUR BORDER FLOWERS—THE FRITILLARY.

WE have not among all our border flowers a more pleasing family than the Fritillarias when well grown. What is more attractive in the spring time than Fritillaria imperialis, or "Crown Imperial," as some choose to name it? It is often seen to the greatest advantage in some cottager's garden. Fritillaries are a rather numerous family, requiring liberal treatment, especially the Imperialis section. They should have the border broken up to the depth of 2 feet, and enriched by well-rotted manure two or three years old, or leaf mould well decomposed, a little sandy peat with a sprinkling of coarse sand well incorporated together, and have thorough drainage. The bulbs should be planted 4 or 5 inches deep. They sometimes grow themselves out of the soil, if they are not taken up and replanted. They should be replanted every second or third year after being divided. They are readily increased by division.

They do well in a moderately sheltered situation, but should be secured from being blown about. If the spring be dry they will be the better for being mulched with decayed stable manure.

The double varieties are very handsome and ought to be far more extensively cultivated than they are as spring-blooming plants. The variegated varieties are handsome either for pots, borders, or spring-garden decoration. They perfect their growth and may be removed in time for summer bedding. For this purpose the bulbs may be dried and stored away in a cool moist place. The yellow-flowered varieties make a bright display either grown by themselves or mixed with the red, but I prefer them in their separate colours.

Fritillaria meleagris, one of our native plants, ought to be in all herbaceous borders or in the shrubbery. Its beautiful bell-shaped blooms and pendant habit, with its curious-coloured flowers, called by some of our country cousins "Weeping Widow," will thrive in most situations. F. meleagris alba, a

lovely flower, of more slender habit than the last-named, deserves extensive cultivation. F. meleagris plena should not be overlooked. F. persica ought to be in all collections. This section will do well in any ordinary garden soil, though they prefer a rather tenacious loam, moderately moist but well-drained. Their marbled flowers are admired by all who see them.—Veritas.

Budding.—"A. C." and all other brother amatours, may save themselves much time and trouble as well as loss of buds, by not attempting to take the wood ont of the shield, but put the shield in the usual way with the wood remaining in. I fonnd this ont many years ago, after reading an article on the circulation of the sap, and have practised it in my small way ever since. It is the sap returning from the upper end of the stock, which flows through the bark of the shield where the cross-cut is made, which makes the junction between bud and stock.—H. C., *South Hants*.

THE CYCLAMEN.

Cyclamen persicum was introduced, according to our dictionary, from Cyprus in 1731, and to point to the merit or beanty of this plant is almost superfinous; but a few words may not be out of place, as its long period of blooming and in the dull season, together with its delicious fragrance, combine to ensure it a welcome. The fragrance and style of blossom secure it a place in the neatest bonquet. There is no wonder that it is so extensively cultivated for the supply of our London market.

The Persian Cyclamen is readily produced from seed—but although the seed is saved from highly scented kinds, not all the produce will be equally fragrant. Immediately after flowering the seed-stalk withdraws itself from public gaze and lies half coiled ronnd the crown. In a few weeks the seed-vessel will burst and shed the seeds if not watched closely. When the seed-vessels are about to burst they must be picked, and the seed sown; they do not require keeping longer than a few days, in order that they may burst their bonds by a natural process. The seed will be ripe usually in April or May. A seed-pan should be carefully prepared for them, as the seedlings will not benefit by transplanting during the first summer. The compost for them to be fibrous and sandy heath soil well chopped, two parts leaf mould, with a little well-decayed cow mannre, one part light sandy turf loam, and a little silver sand, the whole pressed down firm, and the soil being rather dry bears pressing close to the seeds, so as to put them just ont of sight; then cover the surface with moss, to supersede the necessity of much watering. Place the pan in a warm corner, and it will only require light sprinkling twice a-week.

The yonng plants will begin to appear in about five weeks, and the moss must be at once removed; nothing more is required during the first summer's growth but to grow them clean and water regularly. Pot lightly in the following February. The seedlings will go to rest about November, and may be put on a cool shelf, and kept moderately dry until the following February. About this period the bulbs must be again potted—singly, in 3-inch pots. Towards May, when they are filled with roots, they will require a shift into 5-inch pots. Place the newly-potted seedlings on some shelf close to the glass in a cool greenhouse. By the ensuing autumn they will be strong bulbs, possessing seven or ten strong leaves. Abont September they will require a partial rest, so again withhold water for a while. Towards the middle of February, or sooner, these two-year-old bulbs will show flower-buds, and then a slight increase both of heat and moisture must be given.

I now revert to the management of the two-year-old plants. The plants being past blooming, the leaves somewhat sere, abont the middle of April a bed should be prepared in one of warmest parts of the kitchen garden on a dry bottom, a few inches of half-rotten leaves and heath soil dug-in and thoroughly mixed. In this the Cyclamen should be planted with their balls of earth entire, the soil being pressed firmly to them sideways. After this they are merely to be kept free from weeds and watered when dry, and by the end of August these stont bulbs would begin to form scores of blossom-buds. At this period they must be potted, and, if they have flonrished, wide-mouthed pots will be requisite. A well-grown Cyclamen, like a well-grown cluster of Achimenes, requires a pan, or, as we generally call it, a seed-pan.

I never could discover why our potters do not supply pans for the Cyclamen, since it does so well in them. A pan for a very strong specimen should be barely 6½ inches deep by nearly 8 in diameter. Nothing looks worse than to see a plant wide and tufty in character stuck in a tall and narrow pot.

Henceforth the plants will require to stand on a cool greenhouse shelf near the glass, regular watering, moderate at first, and increased with the increase of foliage. By November they will be in blossom, and continue so through the winter. If a long succession is required some may be kept back in a cool frame, for they will endure 7° or 8° of frost tolerably well if hardened previously.—J. H., *Gardener to Lady C. Legges*.

Dickson's Favourite Cucumber.—I can testify to all Mr. W. Taylor says of his Cucumber. It is a first-rate variety for general purposes; one that does not require much heat to grow it to perfection. We have grown it three seasons with equal success. Last year we planted, the latter end of March, three plants in a three-light box, in a mixture of chopped turf and leaf mould, on a dung bed with a moderate heat. The first fruit was cut April 28th, and from that date to May 28th sixty-six were cut, fine fruit 15 to 16 inches long. Our last plants were put out in the latter part of June in some pits that had contained bedding stuff, and previous early Potatoes, so that they had not much bottom heat and no top heat; they grew luxuriantly, and continued in good bearing till November.—G. P., jun.

Two Useful Hints.—Very often a screw-hole gets so worn that the screw will not stay in. Where glue is handy, the regular carpenter makes the hole larger and glues in a larger plug, making a nest for an entirely new hole. But this is not always the case, and people without tools and in an emergency often have to fix the thing at once. Generally leather is used, but this is so hard that it does not hold well. The best of all things is to cut narrow strips of cork and fill the hole completely, then force the screw in. This will make as tight a job as if driven into an entirely new hole.

Another hint of a similar character may be useful. One often desires to put a staple into a block of stone. The hole is made, the staple inserted, and lead melted and run in. But unless the hole is made with the bottom larger than the top, the lead will in time work out if there is much jar or side strain on the iron. Besides, the lead itself is liable to some compression, which admits of looseness, especially after being subjected to very hot fires. A much better article is sulphur. If this be melted and poured-in around the staple instead of lead, it makes a much more durable job. Besides, it is often more easy to procure sulphur than lead, as every store keeps it that deals in general variety.—(*American Builder.*)

AMERICAN APPLES.

[The following communication was received with a collection of Apples by Messrs. Stuart & Mein of Kelso, N.B.]

This collection of Apples was grown at Kalamazos in the State of Michigan in the United States of America. The specimens in this collection are a few of the most approved sorts that are cultivated in the western States. The variety that I would most especially recommend for cultivation in Scotland and England, even as a standard tree, is the Waggner. This Apple, while possessing every requisite for the table, has fine flavonr, beauty and symmetry of form, is also remarkable in its habit of growth. It may be said to be rather of a dwarf, thickset, upright habit, forming a tree of the finest symmetry. The buds on the young wood being prominent and thickly set, it comes very soon into bearing, so much so that I have frequently seen the trees in the nursery row of three and four years' standing bearing large quantities of fine specimens of fruit; and in this case, when the trees are set out in the orchard and thickly set with fruit, it is absolutely necessary to thin-off the fruit to a proper distance, so that it may not only grow large, but that the tree may be so strengthened as to bear a full crop every season, which it will not fail to do if this is properly attended to.

There are several other varieties in this collection which, I have no doubt, might to a certain extent succeed as standard trees in this country, and it is very likely that the greater number of them have been already tested; but there is no doubt that all of them would succeed much better in producing far finer specimens of fruit when cultivated on the wall, or even as

espaliers. For this, especially, I should suppose that that large Apple The Tompkins County King would require a wall, and would be an astonishing production for the size and beauty; so also would the Northern Spy, the Baldwin, the Belmon, and all of them.

There is no doubt but the difference in climate exercises a wonderful influence in the flavour and appearance of the same variety of fruit. A very striking instance of this came under my own observation the first or second year after I came to America. The Ribston Pippin, which I had been in the habit of cultivating in Scotland on the wall to the greatest perfection, and was generally esteemed as the most superior in flavour to all others—I found a single tree of this variety growing in a large orchard of ten acres, and I asked the owner if he knew the name of that Apple, and what he thought of the quality. He said it was known by several names in this country, but he had understood that it was the Ribston Pippin; but as to its quality, it was considered only second or third-rate. I mentioned that with us in Scotland it was considered as our No. 1 first-class. He immediately drew his conclusion, and was not slow in asserting that we must have a very poor stock of Apples in Scotland. I tasted the fruit, and found it ripe and mellow, but in no way flavoured as I used to grow it. I drew the conclusion at once that it was too highly ripened in our hot climate, and I found the next year by an experiment that in this I was perfectly correct. I therefore the next season watched the tree, and before the fruit was fully ripened (with a rich yellow, as it does here), I took off a quantity of the fruit—the very same as has to be done with many of our finest Pears—and I was very much pleased to find that I had got these Ribston Pippin Apples nearly as fine as ever I had them in Scotland; and therefore I drew the conclusion that this process, and the reverse of it according to the different circumstances of two climates, would be absolutely necessary in order to bring out the same fruit with full perfection.

I have a quantity of the scions and a few of the one-year graft, with roots of several of these specimens. If you consider them of any importance, I shall be happy to send you a few to experiment upon.—George Taylor, *Kalamazos, State of Michigan.*

Nectarine.—*Welbeck Seedling.*—A seedling raised by Mr. Tillery. "The specimens of this fine Nectarine which Mr. Tillery sent were not only exceedingly beautiful in appearance, but were also most excellent in quality. Leaves crenated; glands reniform; flowers small. Fruit as large as those of Balgowan, in some cases roundish-ovate, in others rather depressed, with a well-defined suture. Skin almost wholly covered with dark red, the shaded parts showing a little watery or pale green ground colour, while the most exposed parts are of a very deep purple-red, sometimes slightly speckled. Flesh greenish-white, red at the stone, full-flavoured, very juicy, rich, and sugary. The flavour is brisk yet luscious, and altogether it is one of the very best Nectarines we have ever tasted."—(*Florist and Pomologist*, 3 s., viii., 13.)

MR. THOMAS WEAVER.

"On the 21st inst. Thomas Weaver, gardener during forty years to the late and present Wardens of Winchester College, aged seventy-one years."

The above was the brief notice we received, and little did the sender think that it announced the death of one of the earliest and worthiest of our gardening friends—little did the sender think that he would cause to us deep sorrow by the announcement; but so it was, and we turned to our desk to pay a heartfelt tribute, when there we found the following:—

IN MEMORIAM.

In the past week there has gone to his rest one who deserves a notice in the Journal to which he has so often been a contributor in former years, though we have not seen much from his pen of late—I mean Mr. Weaver, gardener to the late and the present Wardens of Winchester College, who was found dead in the potting-shed of the garden which he loved so well and had tended so carefully for more than forty years.

He began his gardening life in the botanical gardens at Oxford, and I well remember his telling me how he used to get young Mr. Baxter to set him "copies" after gardening hours to teach him to write. When the late Warden of Winchester was appointed he applied to Mr. Baxter for a gardener. He at once recommended Thomas Weaver. How good the choice was no one who has ever seen the garden under his care can doubt for a moment. For years he managed the garden entirely alone—a thoroughly "working gardener" indeed. When the Diocesan Training College was established at Wolvesey Mr. Weaver was asked to give botanical lectures to the pupils, which he gladly undertook with his master's leave. I say his "master," for Weaver was never ashamed to use this word, though there are no such things now! About this time the Warden suggested to him that he should have someone to help him in the garden, an offer which he gladly accepted. At the end of the week, when his book was brought in, the Warden observed that the extra man was not charged. "No, sir," was the reply, "you allow me to lecture at the Training College, which I think a great honour. I cannot think of letting you pay the man who does my work. I am only thankful to you for allowing me to have him." He has, in fact, been "single-handed" in the management of that large garden, and surely no garden was ever better kept; no garden ever supplied a more unfailing succession of flowers and vegetables of the very first order. Who that has ever seen them can forget his Asparagus and his Strawberry beds? Who has ever gone round the garden with him without gaining many useful cultural hints? Who has failed to learn from him a lesson of unswerving duty and faithfulness? for this was indeed his characteristic. His contempt for what he called "six o'clock men" was quite amusing.

His death was in keeping with his life. He had gone to the garden on Thursday to shut-up his houses, and it is supposed that feeling unwell he went to the pot-shed to sit down. He was found with his head on his hand quite dead. Dear old man! may we, when our time comes, be found to have been as faithful in the discharge of our duty as he was—aye, "faithful unto the end."—H. G. M., *Michelmarsh Rectory.*

The next letter we opened was this:—

"I feel it to be my painful duty to write and tell you of the death of my dear father, who passed away sitting on a wheelbarrow in a little shed in the dear old garden he loved so well on Thursday afternoon, the 21st. He was quite well and in good spirits when home to his dinner at 1 P.M. He sat reading your Journal until about quarter-past two, when he left home to go into the High Street to pay a little bill, &c., and returned a little past three through the Warden's house, where he spoke to the cook in a pleasant joking way as he passed through into the garden, and told where he had been. He went briskly on and opened his little 'sanctum,' as he called one of the little sheds, to take off his coat and hat for work, but instead of that must have felt a pain or giddiness in the head, as he sat down on this old wheelbarrow, leaned his head against the wall, and fell asleep—so sweetly, so peacefully, with a smile which still remains and seems to say, 'I know all that you're doing, but I'm not going to wake up.' We cannot yet realise the thought that he is gone.

"Feeling it would be his wish that we should write and let you know the circumstances, I have thus taken the liberty."

Can we add without bathos anything to those testimonies? Yes. This extract from a note to us by the Warden:—"I am sure you will condole with me on the loss of my old gardener, Weaver, who was found dead in the garden which he loved like one of his own children."

Thus friend, family, and employer in unison bear testimony to the worth of our old supporter. In all that they say, in all that they feel, we fully coincide. Weaver was a thoroughly honest man, and we use the epithet in its broadest sense; he was true to his family, true to his friends, and true to his employer.

HARDWICKE HOUSE.—No. 2.

THE SEAT OF LADY CULLUM.

All the glass houses at Hardwicke are easy of access from the mansion, and in such positions that the proprietor can walk from the drawing-room to the conservatory, and from thence to the ranges of vineries, Peach houses, ferneries, &c., without passing into the open air, with the exception that the stove and another house, used for miscellaneous subjects in winter and for Cucumbers and Melons in summer, is isolated. The present notice will begin with the stove, a span-roofed structure 15 feet by 47 feet. Until recently it was a wood erection entirely, but portion of it has been converted by Mr. Beard of Bury St. Edmunds into their new patent system of metallic bars and patent glazing without putty, and so far as

I could see it answers admirably. Mr. Fish has at the same time had all the internal fittings of wood removed and substituted them with stone, slate, and iron, so that no woodwork is exposed to the wet and heat of a stove temperature, which in a very few seasons make sad havoc with the best pine wood. The occupants of the house are of the usual description of well-furnished stoves. Euphorbia jacquiniæflora is grown extensively, its small bunches of brilliant flowers are of great value at this season. Adiantum concinnum was very pretty, and Platycerium grande, the best of the Stag's-horn Ferns, was also in fine condition. Marantas, of which by far the finest was M. Veitchii. Monstera deliciosa fruiting freely. Some of the best and most useful of Palms and Cycads are also grown. There is also a fine plant of Quisqualis indica planted out: this is a very useful evergreen stove climber, which was introduced to our hothouses from Iowa in the Waterloo year; it is of easy culture, and is admired for the brilliancy of its sweetly-scented orange-red flowers.

The next house is of corresponding size, and is now cool. It contains amongst many other fine things a number of very healthy plants of Daphne indica on their own roots, a mode of culture Mr. Fish prefers to grafting them, as they are usually done, on the D. Mezereum. My own experience coincides with his in this respect. I find the plant is readily propsgated by cuttings, they make bushy plants, and flower at every point. The plants stand on slate platforms, on which in summer the soil is placed to grow the Cucumbers and Melons. The house I could see was well adapted structurally for them, but Mr. Fish also informed me that they did well with only about 4 inches of monld being placed on the slates. I had always been accustomed to grow Hoya bella and Allamanda in a high temperature in winter, but they are both wintered in this cool

Fig. 21.—Hardwicke.

house, and I was informed after their long rest flowered very freely. The first vinery entered was in use as a forcing house, and what of the Vines meanwhile? They are tied-down near the base of the top lights, and by a simple arrangement of the front sashes are speedily turned outside. It is done in this way: A shelf 18 inches wide is fixed at the base of the rafters, another of corresponding width level with the wall-plate. The Vine rods are tied between the two shelves, and the sashes are brought in from the front to the back of the shelves, where they are fixed until the time comes round for the Vines to start into growth. There is a bed of leaves in the house, so that any quantity of spring-flowering shrubs, such as Lilacs, Deutzias, &c., may be forced. On the back wall are trained Fig trees, which very seldom feel the pruning-knife. Mr. Fish believes that the trees fruit much more freely if they are allowed to grow freely; the growths are trained one over the other, so that the branches are three and four deep. I could see plenty of fruit-bearing wood, and have no doubt that abundant crops are produced. Mr. Fish showed me a number of Fig trees trained on the walls and roofs of some out-buildings near the garden. The growths of these were tied loosely in the same manner, and the crops are enormous. I believe the knife had been seldom or never used on the trees. On one of the vinery walls was a large seedling Loquat; it flowers annually, and sometimes produces fruit.

On the back wall of the Muscat house are trained plants of Lapageria rosea and the more recent variety L. alba. The Vines in this house are planted both inside and outside, but they have not given satisfaction in either position, a fact which is doubtless traceable to the character of the soil, as no pains have been spared in making borders for them. The soil does not seem to be heavy, and the subsoil is chalk.

Passing through a small house filled with Camellias well set with flower buds, we enter a Peach house. It is a lean-to, and both planting and training have the mark of originality about them. On the back wall Figs are planted. Over the path at intervals arches have been placed of very stout iron rods. Between the path and front of the house is the border for Peaches and Nectarines. The trees are planted in a single row about 6 feet apart in the centre of the border, each tree being provided with a trellis formed of wires strained horizontally from the front to the path at the back. The trees can be readily got at by the man who has to prune and train them, and they annually produce good crops of fruit. In the next house, a small one, Passiflora edulis is cultivated for its fruit, which is here esteemed useful for dessert. The next house to this in the same range has Peach trees planted out and trained to the back wall. Stanwick, a very uncertain variety, does well on this wall; the fruit ripens without cracking, and the flavour is excellent. The house is also used for

wintering bedding plants and a large collection of Fuchsias. Most of the latter were large plants trained as pyramids, and, perhaps, half a score years old. The branches are roughly cut-back in the winter. Under this treatment they flower profusely, much more so than young plants. The internal arrangement of the house we enter next is unique; the stages are composed of rockwork, and the "clinkers" that are obtained from brickfields cemented together. The house is a lean-to, and one terrace rises above another from the front path to the back wall, the artificial rockwork being clothed with Lycopodium, Isolepis, &c., the occupants of the stages being well-grown specimens of the finer species of Ferns. There were very handsome specimens of the magnificent Adiantum Farleyense. A characteristic of this variety, which others as well as Mr. Fish have noted is, that large plants die-off suddenly without any apparent cause. A plant under Mr. Fish's care, 5 feet through, went in this way. A. tenerum is a charming species, so is A. colpodes, and the most useful and easiest grown of all is A. cuneatum. The finest plant of Platycerium alcicorne I had ever seen was suspended in a basket in this house. Trained overhead in wild profusion are Passion-Flowers, represented by Passiflora princeps, P. alata, P. quadrangularis, and P. edorata. Trained against the wall of the passage leading to the conservatory was a grand specimen of Heliotrope, which must be useful to cut from all the year round. The brilliant Tacsonia Van-Volxemii is trained to the roof, and in contrast to it is a noble specimen of Mandevilla suaveolens. Its snow-white flowers are deliciously scented. It succeeds best planted out; if the roots are confined to a pot the leaves become a prey to red spider. Plumbago capensis, also planted out, was in good health, and produced its pretty pale blue flowers in abundance. In another house are great tree-like specimens of Brugmansia suaveolens and B. atro-purpurea, and when covered with hundreds of the large trumpet-shaped flowers the sight is sufficiently striking to be remembered during the years of an ordinary life. Brugmansias do not thrive well in pots, they are gross feeders, the roots will not bear restriction. There are in the same house some specimens of Australian tree Ferns that would delight the heart of a London exhibitor.

The kitchen and fruit garden is removed some distance from the house. It is surrounded by a wall, which is furnished with well-trained Peach, Nectarine, and Apricot trees. The blossoms are protected from frosts by an ample glass coping. The sheets of glass are only used when the trees are in flower; they are placed upon a framework of iron, which is permanently fixed to the wall. The trees are trained to stout iron wires strained perpendicularly, and not in the usual horizontal manner. Apricots do pretty well for a time, but the trees are short-lived, and frequently require renewal. Plums will not thrive as standards, but do well trained as cordons; the trees are trained to single wires fixed in a horizontal position about a foot from the surface of the ground. Apples also do well under the same treatment, but they must be worked upon the French Paradise stock, and not upon our own English Paradise, which causes the trees to grow too strongly. Another system of cordon training, which may be called diamond cordon, answers well for Apples. The trees are about 3, or they may be 4 feet apart, and are trained to stout wires fixed obliquely in the ground. The first wire leans to the right, the next to the left, and so on to right and left alternately; the trees thus cross each other, and form a row of diamonds. Fruit trees have little tendency to make wood here, all the branches being studded with fruit buds. The bush and pyramidal-trained Apple and Pear trees have a remarkable appearance, as almost every bud seems to be a fruit bud. In the garden are specimens of Beard's glass walls; these hasten the blossoming of the trees, consequently they require protection both from frosts and the proverbial early birds which eat the early blossoms.

Mr. Fish is well known as one of the foremost writers on all matters horticultural, and the arrangement of the beautiful grounds at Hardwicke show that if his precepts are good his example is better; and I can only conclude by thanking him for the kind manner in which I was received and shown over the beautiful gardens under his charge.—J. Douglas.

Deaths.—William Port Ayres died on the 14th inst. His father was a gardener, and the son, after completing his professional education at Chiswick, became gardener to J. Cook, Esq., Blackheath. He did not succeed as a nurseryman at that place, and thence went to Nottingham. He wrote on the cultivation of the Cucumber, and was one of the editors of the "Gardener's Magazine of Botany," which failed as it deserved, because started by its publisher in spiteful opposition to "Paxton's Flower Garden." Mr. Ayres suggested a form of hothouse, the manufacture of which we believe he was pursuing at the time of his decease.

Archibald Turnbull died on the 19th inst., aged eighty-five. He was of the firm of Dickson & Turnbull, nurserymen, Perth, and is a great loss to the locality.

METEOROLOGICAL REPORT FOR 1874.

Ticehurst, Sussex.

380 feet above the sea; 51° 2′ N. Lat.; 0° 26′ E. Long.

Year.	Barometer.		Thermometer.		
1874.	Highest reading.	Lowest reading.	Max.	Min.	Rainfall.
January	30.30	29.28	52	28	2.61
February	30.32	29.00	55	31	2.05
March	30.38	29.40	66	18	0.83
April	30.12	29.06	77	30	3.07
May	30.20	29.36	75	30	1.12
June	30.26	29.50	80	35	1.98
July	30.12	29.56	89	46	0.85
August	30.26	29.40	77	43	3.52
September	30.20	29.40	70	40	3.82
October	30.12	29.18	65	36	3.86
November	30.30	28.56	65	25	2.59
December	30.10	28.60	50	12	3.14

WHITE HARICOTS.

Among the little-known vegetables on this side of the channel, perhaps the least known of all is the Haricot Vert, or Green Haricot, which is highly esteemed in Paris, but seldom seen save upon the tables of the rich, where it ranks as a luxury even greater than early Green Peas. As a dried vegetable Haricot Blanc, or White Haricot, is much more widely known in France, where it forms a portion of the daily food of the people; ever since the Potato famine it has been, but unfortunately not extensively, used in England.

The difference between our Scarlet Runner and the Haricot is that we eat the whole of the former while young—that is to say, the whole of the pod and its contents, cut up, while with the Haricot Bean the entire pod, which is lined with a tough skin, is discarded, and the seeds or green beans alone eaten being shelled like Peas. There is no reason why Haricots should not be grown in this country, at any rate to be eaten, young; when required as a part of the supply of winter vegetables, doubtless they can be imported at a much lower price than we could produce them here; rent of land and price of labour almost preclude the growing of ripened seeds in England.

There is a widespread but erroneous idea that our climate is not suitable for the growth of many vegetables extensively cultivated by our continental neighbours; the truth being, however, that we could grow them as well, or even better, but not so cheaply. Yet the outlay in their production need not be so great as to preclude a profitable return on their sale.

The imported White Haricots, such as we buy for culinary purposes, are also excellent for sowing; we have taken the Beans haphazard for this purpose from a sack, and found that every seed germinated and bore a large crop of sweet, delicately-flavoured, nutritious food. The bine of this variety grows as rapidly and quite as luxuriantly as our common Runner Bean, to which, at the season of blooming, it forms a pretty contrast in the colour of the flowers, the pure white-winged blossoms of the one adding intensity of colour to the brilliant scarlet of the other. The Haricot is as long in the pod, but neither so wide nor so coarse in texture as that of its compeer. The cultivation is exactly similar, where the one will grow well the other will likewise flourish. Both descriptions being half-hardy annuals, the seed should not be sown in the open ground until the end of April or beginning of May. When the plants have attained a sufficient height to cover the sticks up which they are trained they should be topped; this tends to make them throw out side shoots and bear a heavier crop of beans. Haricots may be grown dwarf in a manner similar to that pursued with Scarlet Runners, but the yield will be nothing like so great. The young green Haricot Beans will

be ready for gathering about the end of August or beginning of September, according to the season. The plants while growing should never be allowed to droop for want of moisture, and occasional watering with liquid manure during dry weather is beneficial in producing rapid growth and early maturity. The beans should be gathered and shelled when they have attained almost their full size, but while they are still of a pale green colour; they should be thrown into boiling water with a little salt, and boiled for about twenty minutes, when they should be served hot, with a lump of butter in the centre of the beans. —(*National Food Reformer.*)

DRESSING VINES.

I HAVE been reading with great interest Mr. J. Wright's very able articles on the "Vine Pruning and Winter Dressing," in No. 717, page 559 and 560, and I am very happy to see that he does not advocate peeling or scraping off the loose bark; but still, I am embarrassed when reading in No. 719, page 4, a piece signed "H.," denouncing not only peeling off loose bark, but also the use of paints made of sulphur, soot, soft soap, clay, &c., and substituting clean water for all. Now, I wish he would tell how I could apply clean water to clean and clear my Vines of red spider and mealy bug, which were so plentiful the year before I got charge that they gummed the Grapes all over and made them unfit for use; and I may safely say it was only by the use of "H.'s" obnoxious mixture I was enabled to have a crop, and now the Vines are almost clean by close watching and close painting with "H.'s" obnoxions mixture. Nevertheless, I would dispense with the painting if I were advised to something better and not obnoxious.—B. G.

FORCING STRAWBERRIES.

RECENT articles on Strawberries have been very interesting; but I have not seen a word from any correspondent in favour of Viscountess Héricart de Thury as an early kind for forcing in pots. I have a few of this Strawberry now fit to send to table from runners early in last June, which were laid in large 60-sized pots, and plunged to the rim the second week in July. They were well rooted in the pots, and then cut from the old plants, and the 1st of August potted into 48-sized pots and placed in full sunshine. At the end of August a frame was put over them, and the plants kept dry through September. The lights were drawn-off all day when fine weather, and put on at night. At the end of September the plants were watered, the frame shut-up early in the afternoon, and the plants soon began to make new growth and throw-up flowers. At the end of October the plants were placed on a back shelf in a warm greenhouse near the glass, and I have picked some ripe fruit for dessert to-day (January 18th), and have the promise of a fair crop.—G. S., *Hadlow, Kent.*

PACKING GRAPES.

SOMETIMES a great fuss is made about the packing of Grapes, such as wrapping them up in tissue paper and cotton wool all round them—treatment which only removes the bloom more effectually, which is the great disfigurement to avoid.

I have a great quantity of Grapes to pack and send off every year, and the arrangement I find to answer the best are square baskets with a handle and a lid. I first line with fine shavings, or in the absence of them a little soft hay; this lining I cover with paper, and the baskets are then ready for the Grapes. I take the basket to the vinery and place it on its end in a sloping position, cut the bunch from the Vine, and remove any decayed or defective berries, place the bunch at the end of the basket stalk uppermost, and so on until the basket is full; I then take the basket by the handle and give it a gentle shake, and the operation is complete. The Grapes will travel safely and unpack with very little loss of bloom.

The bunches must be cut from the Vines and placed at once in the basket in which they are to travel. Our baskets hold about 20 lbs. of Grapes, and so packed I never hear any complaints, which would very soon be made by the fruiterers if the Grapes were the least damaged.—J. ANDERSON, *Hill Grove Gardens.*

MARIE BAUMANN ROSE.—I am astonished at the Rev. Mr. Radclyffe not being able to recommend Marie Baumann. Here, with a wretched climate, a rainfall nearly equal to that of Kendal, and the atmosphere full of smoke, there is no Rose like it for perfume, colour, beauty of shape, and profuseness of blooming. Its only faults are, that it is a weak grower on the Manetti, but not so on Mr. Prince's cultivated seedling Briar; and then it hangs its head like a young maiden blushing at her own loveliness, but thus hanging only in windy weather or after a shower of rain.—T. WATSON, *Manchester.*

NOTES ON VILLA AND SUBURBAN GARDENING.

The Amateur's Vinery.—Undoubtedly this is one of the most useful and interesting houses that can be attached to a suburban residence—that is, if it is constructed internally with a view to its being used for other purposes besides that of growing Grapes. There ought to be either a stage or a brick pit under the roof; but the question is, which of the two would be the handiest or most useful during the season? If to economise space as well as allow convenience for other things, I should say a stage, because not only might the stage be used for bringing plants into bloom at this time of the year, but it also affords more space for storing plants during the winter; and again, the room under it might be used either for storing plants when dried off, or for the bringing-on of such things as Rhubarb, Sea-kale, and Asparagus—at this time of the year, therefore, a great saving of labour in making-up separate beds elsewhere, and the heat which is necessary to bring on the Vines serves for the other things also. The pit would, in one sense, be more useful just now and for a few weeks to come, because it would be more beneficial to the Vines if filled with heating material, and in which plants to be forced into bloom might be plunged, and would no doubt do better than in the dry heat on a stage; and again, part of it would be required on which to place a hand-light or two for propagating bedding and other plants, unless if the pipes run round the front of the house and a portion of one end of them bricked-up, with lights on the top, so as to form a small heated frame, then propagation might be carried on there. If this were done it would be another reason why a pit would not be so useful as a stage, because there would be no need to use it for propagating purposes, and a pit takes up much room that cannot be so serviceable when not wanted for particular purposes. February is upon us with its increased daylight, and I hope plenty of sun, and those who have such a house as I describe may put it into working order and start the things in a gentle heat at first; but as the season is advancing they may reasonably expect these things to do fairly without very much additional labour, but they must be attended to at all times, or it is better not to attempt anything at all, but just let the Vines and plants come on naturally.

Now let us see what the house is to be filled with. As I have mentioned above, Rhubarb, Sea-kale, and Asparagus are the principal things to occupy the space under the stage. The former must be dug-up from the open ground as whole as possible, and placed on a bed of earth prepared for it in the house, the roots and crowns just covered with earth and watered to settle it about them; and the same for Asparagus—I may say done in exactly the same way; but when the Sea-kale is taken-up from the open ground it should be put thickly into pots and covered over with another one so as to blanch it properly, or the roots may be planted in a bed of earth the same as for Rhubarb, and then covered over with hoops and mats so as to be in total darkness. On the back stage may have the tallest of the plants to be forced, such as Azaleas, Begonias, Roses, Lilacs, Deutzias, Spiræas, Fuchsias, Rhododendrons, Kalmias, Weigela rosea, Acacias, Forsythia viridissima, and the other tall-growing things; while the front stage ought to be taken-up with the dwarfer-growing, such as the Dielytra spectabilis, Richardia ethiopica, some of the strongest and most advanced of the Cinerarias, dwarf-growing Ferns and Lycopods, then come the different sorts of Dutch bulbs, all of which if they have been well prepared as before advised, will have their pots full of roots and will force well. Some of the best-ripened bulbs of Amaryllis, and a few pots of Achimenes, Gloxinias, and Gesneras, as well as Lily of the Valley, must not be omitted. At the same time as occasion requires, a few pots of Verbenas, Heliotropes, Lobelias, and most other sorts of softwooded bedding plants to produce cuttings for propagation. Indeed such a house as I have described, if worked very carefully and filled with the above-named plants, will not only afford a grand show during the spring for the conservatory, but it will be the groundwork of all the decoration to be done by plants, both bedding and otherwise, during the whole season that is before us.

All plants for forcing should have a season's good preparation beforehand. I allude particularly to hardwooded plants, which should be in a good state at the roots, have made a good growth with plenty of buds, and the whole well ripened before they are fit for the ordeal of pruning. Those plants that need it should have a top-dressing of the same sort of soil mostly used for their growth the year previous, and the drainage of every plant so established should be examined, and if necessary renewed, so as to leave a free escape for the water. The house with its occu-

pants should not be started at a high temperature at first, as the days are lengthening—say 50° at night and 10° higher in the day, with sun heat, and have air admitted to them when likely to go beyond that. The Vines, as well as the plants, ought to be syringed twice or thrice a-day, and be shut up early in the afternoon, say by two o'clock, and syringed at that time; this gives the whole a time for growth in the afternoon, and the atmosphere is then most suitable for it. It should be borne in mind that as it is found necessary to increase the heat the moisture must also be increased, which not only advances the rooting power of the plants but keeps away the red spider.—THOMAS RECORD.

THE GOLDEN CHAMPION GRAPE.

IN reply to Mr. Thomson I write to say that the foliage of the shoot or lateral upon the Trebbiano Vine which bore the bunch in question differed slightly from the foliage of the other shoots, and became yellow and ripe much earlier, but was not, I think, quite so large as the foliage of the Golden Champion usually is; the wood or bark of the shoot which bore the bunch in question was also a shade darker than the others. I think I may confidently assure Mr. Thomson that there cannot possibly be any mistake in the matter, as so many people not only saw the bunch but tasted the fruit and minutely examined the same, including Dr. Hogg, whose eye it caught nearly as soon as he entered the house without having it pointed out, and before he was even aware that such a thing existed. There were four eyes or buds upon the shoot, and I have inserted them all a week or two since. I hope I may succeed in getting them to grow; and should only two of them do so I shall have pleasure in sending one of them to Mr. Thomson.

A gentleman in writing to me upon the subject has asked me to take particular care of the bud opposite to the bunch; but it so happens that no bud formed there, or at most a defective one, as the bunch was produced near to the end of the shoot, and the four buds I have secured were formed under the bunch—that is, between the bunch and the rod.

As Mr. Thomson justly observes, the subject is certainly interesting. I have stated all particulars as far as I know. I can offer no explanation, but can only hope that modern science may be able to throw light upon the matter.—P. GRIEVE, *Culford, Bury St. Edmunds.*

EARLY ENGLISH WRITERS ON GARDENING.

No. 2.

LEONARD MASCALL.

THE Mascalls are a Sussex family of long standing, and their name seemingly a corruption of the Norman Marescal.

Fig. 22.

The founder of the family in Sussex probably came over with William the Conqueror, members of the family being its Sheriff in the reigns of Richard Cœur de Lion and John. At the Heralds' College their arms are recorded as Sable, six fleur-de-lis or, three, two, and one, with a bordure engrailed, argent. East Mascalls, a residence in the parish of Lindfield, belonged to them; but the chief mansion of the family was Plumpton Place, in the parish of the same name, about five miles from Lewes. It is a five-gabelled house, the three centre gables being smaller than the two outer, which advance as the ends of the wings. Mr. Lamb, an architect who published an illustrated volume on "Ancient Domestic Architecture," gives a view of the place, and concludes his slightly adverse criticism by saying, "The design is chiefly commendable for its simplicity of form and its harmony of details, and for the absence of all architectural impropriety in the architectural features." He also remarks that it has the appearance of being different tenements, which agrees with its present occupants, who are families of cottagers. It was surrounded by a wide moat, and a drawbridge over in front of the mansion—three sides of the moat remain. It now belongs to the Earl of Chichester.

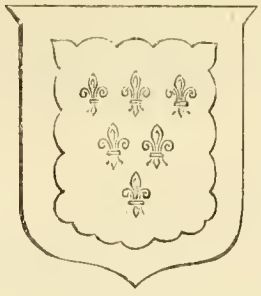


Fig. 23.—Shield.

The Mascalls were not lords of the manor of Plumpton, but were its Crown tenants. Leonard Mascall, the especial subject of my notice, was the owner of Plumpton Place. Of the dates of his birth or death I have not been able to obtain particulars, but he certainly lived throughout the reign of Elizabeth and some part of that of James I. Fuller asserts that he introduced carp and Pippins "from over the sea;" but he attributes to him the first introduction of that fish, a merit to which he certainly was not entitled. He may, as has been stated, have introduced carp from the Danube and bred them in the moat of Plumpton Place; but in an earlier part of the century Dame Juliana Berners in her "Boke of St. Albans" says, "The carpe is a dayntevous fyshe; but there hen but fewe in Englande, and therefore I wryte the lesse of hym." These facts testify that Mascall lived at and strove to add to the attractions of his mansion. They justify the conclusion that he travelled on the continent, and it is certain that he was acquainted with both the French and Dutch languages, and many of the details of grafting and planting are stated by him to have been translated by himself out of those languages.

Fuller's statement is—"Leonard Mascall being much delighted in gardening, man's original vocation, was the first who brought over into England from beyond the seas carps and Pippins; the one well cooked delicious, the other cordial and restorative. For the proof hereof we have his own word and witness in his book of Fishing, Fowling, and Planting; and did it, it seems, about the fifth year of the reign of King Henry VIII., anno Domini 1514. The time of his death is to me unknown."—(*Fuller's Worthies—Sussex.*) The volume Fuller quoted from is entitled, "A Booke of fishing with hooke and line and of all other instruments thereunto belonging. Another of sundrie engines and trappes to take Polcats, Buzards, Rattes, Mice, and all other kindes of vermine and beasts whatsoever. Made by L. M. 1590." Mascall refers to himself in this passage—"The carpe is a strannge and daintie fish to take. The first bringer of them into England (as I have been credibly enformed) was maister Mascoll of Plumsted in Sussex, who also brought first the planting of the Pippin in England." The mis-spelling of the names both of the author and his residence may be the printer's errors, but the name of Mascall in those days of phonetic and unfixed spelling occurs in various forms, even as "Mastall." Then as to Plumpton being called Plumsted in the sixteenth century, the change to the modern form may have arisen as the houses and population increased. In Oxfordshire is Stead-ham-ton, literally "the village become a town." There is no mention in the sentence in Mascall's book that the introduction of carp and Pippins was so remote as 1514, and that date is more applicable to Dame Berners' time.

In 1572 Mascall published his first work—"A Booke of the Art and Manner how to graff and plant all sortes of trees, how to set stones and sow Pepins to make wild trees to graff on, as also remedies and medecines, with other new practices, by one of the Abbey of the St. Vincent in France, with the addition of certain Dutch practices, set forth and Englished by L. M."

In the library of the British Museum are other editions published in 1575, 1580, 1582, 1592, 1652, and 1656. In 1640 was published, "The Countryman's Recreation," which contains this book of Mascall's, bound up with Reynold Scot's "Perfect Platforme of a Hoppe Garden," and De Sercy's "The Expert Gardener." This seems to have been a publisher's compound.

"The Art and Manner how to graff and plant," though a translation, has the merit of being largely original, the record of his own practice and observation, and all his works are entitled to the same credit. At the commencement of the volume is an address in rhyme from "The Booke to the Reader," and the following verse extracted from it testifies that Mascall was not a mere copier of other men's experience—

"Weigh well my wordes, and thou shalt finde
All true that I doe tell;
Myne auethour doeth not write by geese,
Practise made hym excell."

One statement he makes either refers to a lost art or is a mere recital of Roman writers' fables. It is that "in the scutcheon ye may graft of divers kinds, as on Peares, Apricocks, and Plums together, and of others also." He writes as if relating his own experience, adding, "I have not knowne or found of any others," and rejects others as "but jests."

This (fig. 24) is one of the illustrations of the volume and if it correctly represents the gardener's costume shows that "the blue apron" had not then been introduced. The "trauses" (birth-name of our trowsers) were hose fitting the limbs closely; over these were the trunk-breeches, stuffed with wool or other soft material, and to so ridiculous an excess that in the Parliament-house the members had rails to sit upon! The sleeved doublet resembled somewhat the stableman's waistcoat of our time. In the gardener's belt were stuck, as occasion required, the implements for grafting, pruning, or training.

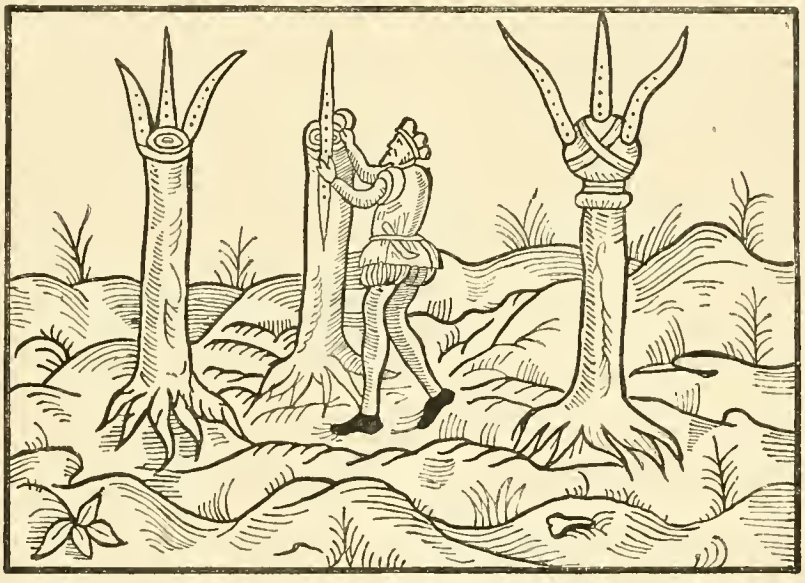


Fig. 24.

Mascall was the earliest writer in English on poultry-keeping. His work is entitled:—"The Husbandye, Ordring, and Governmente of Poultrie. Practised by the learnedste, and suche as have bene knowne skilfullest in that arte and in our tyme." This little duodecimo volume of about 150 pages was published in 1581, and the dedication is headed, "To Mistresse Katherine Woodforde wife to Maister James Woodforde Esquier and cheefe clarke of the kitching to the Queene's Majestie Leonarde Mastall wisheth a prosperous estate in health long to continue;" and he goes on to state that she had "a desired minde how to use and govern Poulterie to profit for maintenance of her housekeeping," and this, and having known her at "Brestall" (Bristol), he dedicates the volume to her. He says it is translated out of Columella and Stephanus, but that there were added many practices known to "all good householders." I have not examined what are these additions, but was disappointed by not finding any description of the fowls then cultivated, for as he lived in the Sussex district, now celebrated for poultry-breeding, I hoped to find some particulars to prove or disprove that the Sussex variety of the Dorking are descendants from those bred in the sixteenth century.

In 1600 Mascall published "The Government of Cattel, Divided into three Books. First of Oxen, Kine, and Calves, and how to use Bulls and other cattle to the yoke or fell. Second, government of Horses with approved Medicenes. Third, Sheep, Goats, Hogs, and Dogs with remedies. Also perfect instructions for taking of Moals; monthly husbanding of Grounds." Other editions were published in 1605, 1620, 1633, and 1662. "The Countryman's Jewel, or the Government of Cattel. Inlarged by Richard Ruscam," which came out in 1680, is an edition of Mascall's work. Mascall at the beginning of his volume says—

"For want of knowledge and good skill,
Oftimes it may so fall,
A man that is full rich in beasts,
He may soon lose them all."

And the volume certainly comprises a large amount of the practical knowledge of the author's period. It evidently attracted the attention of Government, for within three years he was appointed to an appropriate office, a later edition stating it was "Gathered by Leonard Mascal, Chief Farrier to King James." The farrier of the Stuart period was in social position on a level with the veterinary surgeon of the present day, and the chief farrier of the Royal establishment was a man of education and acquainted with the relative sciences as then known. Thus Snape, Charles II.'s farrier, published a volume on the anatomy of the horse.

Aided courteously by the Rev. Mr. Woodward, Rector of Plumpton, its registers have been searched for some record of Leonard Mascall, but in vain; and similarly fruitless has been a search obligingly made by E. C. Currey, Esq., of the wills in the registry of Eastern Sussex.

The registers in Somerset House have been equally unproductive. We can therefore only surmise approximations to the dates of Mascall's birth and death. His portrait prefixed to these notes, published in 1596, represents him as about fifty years of age, and therefore his birth at about 1546. This is not inconsistent with the publication of his first work in 1572, for he would then be twenty-six. His death may be fairly concluded to have occurred between the years 1605 and 1620. The first-named year is the date of the last edition of his "Government of Cattle," which has stated on its title-page, "Gathered and *set forth* by Leonard Mascall." On all subsequent editions it is merely stated to have been "gathered" by him. In "The Countreyman's Jewel, or the Government of Cattel," published in 1680—on the title-page it is stated, "Gathered at first by Leonard Mascal, but much inlarged by Rich. Ruscam, gent." Ruscam speaks of him as "that judicious and fortunate Mascal, chief farrier to King James."

DOINGS OF THE LAST AND PRESENT WEEKS.

HARDY FRUIT GARDEN.

Last week it was stated that our nailing was nearly finished. We do not have much to do, as the orchard house supplies us with all the finer fruits required; but the greatest number of gardens are not furnished with orchard houses, and, as a rule, in the United Kingdom the finer fruits must be grown on walls. There should be no delay in finishing off all pruning, and tying, or nailing the trees. In our apprentice days it was the rule not to nail or even prune Apricot and Peach trees until the blossoms were very nearly at the point of opening, and this was just at the time that the greatest pressure required to be put upon the men in every department; whereas, if the nailing had been attended to in favourable weather during the winter months, it could have been done in a less hurried manner. Where well-trained wall trees are a prominent feature much time is taken

up with tying or nailing, and one reason why time should be taken by the forelock is, that it is not possible to do it either in wet or cold weather. Men cannot stand on a ladder or at the base of a wall and drive nails if they are shivering with cold; they should in cold weather have digging or trenching to go to before breakfast in the morning or towards dusk in the evening. We have known men nailing Morello Cherries behind a north wall, and cut their fingers nearly to the bone, and not know of the accident until they saw the blood streaming from the wound. We are now getting more into summer pruning for fruit trees, and there is no reason if time can be spared why much of the nailing should not be done in the autumn. It is simply bad management to lay-in a large quantity of young wood in the summer months, to cut it out in winter; if no more young wood is laid-in than is required for the purposes of fruit-bearing (and not a single shoot more ought to be laid-in than, with a system of summer pruning carried out as it ought to be), the labour required now would be a mere tithe of what is in too many instances required.

Peach trees ought to be taken down from the walls every year, and if necessary the branches should be washed, and if the old nails are used again they ought to be roasted first. New shreds should be used, and it is very often necessary to cut out a few of the lowest branches and bring down some of the others in their place. A tree is generally furnished with five or seven main branches; these ought to be nailed-in first, the smaller and fruit-bearing branches being regularly disposed between. Plum, Apricot, and Cherry trees are usually trained in the same way, but it is not at all necessary to undo the fastenings of them. We have seen Pear trees trained in many different ways; but where there is a fancy for variety, the best is the oblique cordon single or double. If single, the trees to be planted 18 inches apart; if double, 3 feet, trained at an angle of 45°. For high walls and large gardens where a supply of first-class fruit is the main object, plant your trees 20 or 24 feet apart, one main branch to be trained vertically, side branches being trained 9 inches apart; the side growths will not start exactly opposite to each other, but they must be brought opposite before taking a horizontal position. The severe weather early in the month prevented planting; all ours was finished last week. The trees had been carefully lifted in the nursery, and were a mass of healthy fibrous roots, the main roots not having received any injury. The trees were selected in the nursery, not because they were the best-looking trees, but because they had been transplanted the previous season. Handsome healthy-looking trees might have been purchased at a cheaper rate, but when sent home the roots would have presented a very different appearance. If large trees are bought, stipulate that they have been transplanted the previous season. Each tree had a barrowful of decayed fibrous loam placed round the roots.

Just a word about planting wall trees. The main stem should not be quite close to the wall, but about 3 inches from it. Do not nail or prune the tree until the buds are unmistakeably swelling.

FORCING HOUSES.

Early Vineries.—The first house has broken regularly, and the shoots are very strong. The night temperature is now 65°. Our plan is to water the borders thoroughly about four or five times. The second watering has been given, about as much having been applied as would cover the ground to the depth of 2 inches. The young shoots are being pinched two leaves beyond the fruit and carefully tied-down to the wires. The tying must be done with great care, as it is always the strongest and best growths that are most likely to snap. Such a variety as Golden Champion can only be trusted in the most careful hands. One growth only should be trained from each spur, and the spurs should not be closer to each other than 15 inches, so that it is frequently necessary to thin the buds out on young wood, but managing so that the growths are as nearly opposite to each other as possible. We shut-up early, and admit air at the apex of the roof the first thing in the morning in fine weather.

Cucumber House.—Half of the plants failed entirely this winter, the other portion planted with Blue Gown is now doing well. During the last four or five years the same stock has been kept true by striking cuttings, but in time the constitution fails and must be re-invigorated by raising seedlings. The plants from seeds sown in December have been grown-on in pots near the glass, and have been planted-out in good condition. The variety is Tender and True. The night temperature is kept at 65°, but a margin is allowed of 3° or 4° either way according to the weather. Sowed Melons, Tomatoes, and Capsicums in bottom heat in the Cucumber house.

ORCHARD HOUSE.

The Peach and Nectarine trees have been removed into the house. They have been plunged over the rims of the pots out of doors since early in October. The fruit buds are very prominent and thickly studded over the young wood. We have always advocated removing the trees out of doors; and as a proof that they receive no injury thereby but are benefited by it, the roots work up into the rich top-dressing, and if not taken out of the material before March they form a network of roots in the fibre over the pot. Other growers in this district leave their trees out later—in fact till just before the blossoms open: this is to keep the trees as late as possible, so that the flowers may not be injured by spring frosts. We are not very particular about this, as the house is heated, and, the pipes being connected to a boiler that is always at work, the expense for fuel is a mere trifle. We have also found that brown scale does not like exposure to the winter frosts, and that the trees are comparatively free from insect pests under the treatment. The trees have now to be looked over and any dead or superfluous branches cut off. The pots do not require water for ten days or so after being brought in, and afterwards water must be carefully applied until the trees start into growth. Strawberries on the shelves require but little water; looking over them once in a week is sufficient. As we do not wish the trees to flower early, all the ventilators are opened in the daytime but shut at night, as, even though there may be no signs of frost at dusk, a change sometimes occurs in the night, as it did on Tuesday, when a sudden change caused the thermometer to fall to 29°.

GREENHOUSE AND CONSERVATORY.

The question was put to us by an ardent amateur, "How must I do to have my Camellias in flower early?" He had been forcing them in heat, and the result was that the buds, instead of swelling more rapidly as he very naturally expected, began to drop off. Now, to have Camellias in flower before Christmas the plants must be placed in heat, say in April, to make their wood, and kept there until the buds are set, when they may again be removed to the greenhouse. The most useful plants to continue the supply of flowers at this time are Cyclamens, Cinerarias, and Chinese Primroses (Primula sinensis). They will continue to flower all through the winter months. The Cyclamens must be carefully attended to, as damp affects the leaves and flowers in all sorts of weather. Damp round the necks of Primulas must be checked with lime dust as soon as perceived. Our Cinerarias are grown for decorative purposes only. Those who are cultivating for exhibition must now be very attentive to their plants. Every alternate watering should be with weak liquid-manure water. The plants must be close to the glass where the air from the ventilators plays freely amongst the leaves. The shoots must be carefully tied out to a wire fastened to the rim of the pot, or to neat sticks. As our forced flowers have not come in yet, the above with the perpetual-flowering Carnations are exceedingly useful. Of course Epacrises and winter-flowering Heaths furnish their quota.—J. Douglas.

PROVINCIAL HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

TRADE CATALOGUES RECEIVED.

Little & Ballantyne, Carlisle.—*Spring Seed Guide.*

Dicksons & Co., 1, Waterloo Place, Edinburgh.—*Descriptive Catalogue of Select Fruit Trees, &c.*

W. Barron & Sons, 16, Market Street, Nottingham.—*Vegetable, Agricultural, and Flower Seeds, &c.*

Brunning & Co., 1, Market Place, Great Yarmouth.—*Illustrative and Descriptive Seed Catalogue.*

G. C. Short, Market Place, Stokesley.—*Descriptive Catalogue of Choice Seeds.*

B. R. Davis, Middle Street, Yeovil.—*Illustrated Catalogue of Vegetable and other Seeds.*

E. P. Dixon, 57, Queen Street, Hull.—*Descriptive Catalogue of Seeds.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Books (*A. C. Swain*).—There is no publication on Auriculas with coloured plates. The gentleman you name has not published any work on floriculture. (*F. J.*).—"The Handy-book of the Flower Garden" is published by Messrs. Blackwood. (*Amateur*).—For common flowers, vegetables, &c., "The Garden Manual." If you enclose twenty post-office stamps with your address you can have it post free from our office. (*E. S. D.*).—Lindley's "Flora Medica" gives such information as you need. Longman & Co. are the publishers. Price 18s.

Apple Trees Cankered (*T. Williams*).—The roots of your young trees have reached the red sandy ironstone subsoil, and the soil above being heavy is retentive of water—both circumstances productive of canker. Cut away the roots that have descended, and slightly top-dress the surface over the roots with manure every spring to induce the roots to keep near the surface.

Price of Pears (*A Constant Subscriber*).—Huge specimens were in a fruitist's window in Covent Garden Market marked one guinea each, but whether they were sold at that price is not known to us. They were Uvedale's St. Germain.

Wild Ginger (——).—Sir S. Baker's plant cannot be the Asarum canadense. The characteristics are different.

Orcharding (*Beta*).—We are sorry we cannot give you the names of either of the Apples of which you have sent us only portions and rind. In all probability they are local varieties, of which you have abundance in Worcestershire. The "Fruit Manual" is far advanced towards completion, the printers having got as far as "Plums;" but the additions to the work have been so numerous, the time taken to produce it has been longer than was anticipated. The best guide we can offer you in your present need is Canon Lee's "Small Farms," published at this office, and sent free by post for 6½*d.* in stamps. It is by the Vicar of St. Peter's, Droitwich, and being in your own district will be applicable to your case. It is a very practical book, and will show you how and what fruit to grow profitably.

Sarracenia purpurea (*A Subscriber, Cambridge*).—The price is about 2*s.* 6*d.* Write to Messrs. Cutbush, Nurseries, Highgate, London, for information.

Tree-boring Caterpillar (*J. Green*).—It is the caterpillar of the Goat Moth, Cossus ligniperda. We published a full account of it with engravings on page 354 of our twenty-sixth volume.

Hyacinths Planting (*Hyacinths*).—In "planting Hyacinths" in pots the bulb should not be more than about half covered with soil, not pressing them into the soil, but placing them upon it, and filling with soil around the bulbs to the required height, pressing it firmly around the bulbs. The soil being in a moist state when the Hyacinths are potted, they should not be watered after potting prior to plunging in and covering with ashes. The soil must be made moist before plunging the pots if it be dry, but it is better to pot in moist soil. The bulbs usually require to be covered about six weeks, or until they have made good roots, and have grown at the top about an inch. When this extent of top-growth is made, and before it is 2 inches long, the pots should be removed from the ashes.

Heading-down Briar Offshoots (*Jane*).—We presume the offshoots have no roots, in which case the earlier they are cut back the better, and if they were rooted when planted they should be cut as soon as possible, and in either case it would have been better done prior to planting.

Late-cooking Apples (*Idem*).—Bedfordshire Foundling, November to March; Dumelow's Seedling, November to March; Brabant Bellefleur, November to April; Lord Raglan, January to June; Norfolk Bearer, November to January; Norfolk Beefing, December to June; Rymer, October to March; Northern Greening, November to April; Striped Beefing, November to May; Winter Majetting, November to March; and Annie Elizabeth will keep often until July.

Santolina and Alternantheras Culture (*Old Subscriber*).—Santolina is a hardy plant in well-drained soil, but in a wet one requires the protection of a frame or pit. It is propagated by cuttings, which root freely in summer in sandy soil in a close-shaded frame, or in spring in a frame in gentle heat. The young plants may be wintered in a warm situation out of doors, planting them about 2 inches apart, or if the soil be a heavy and wet one winter in a frame in the cutting pans, hardening well off in spring, and putting out in light rich soil in April in a warm position, shading for a few days and keeping moist, removing to the beds at planting time. It is a remarkably neat edging plant for beds, and for lines in carpet bedding. The foliage is white or silver. Alternantheras are propagated by cuttings, which root freely in sandy loam in gentle heat, kept moist and shaded, and when well rooted potted off singly and grown-on in heat; or they may be planted out in a pit about 2 inches apart, and grown on so as to have them strong by planting-out time, and well hardened off. In winter they require a temperature of 55°, and to be kept moist. To strike freely they require a bottom heat of 70°, and top heat corresponding. We do not think you will be able to obtain seed of either.

Caladium Culture (*I. H.*).—Pot them about three tubers in a pot, or five if small, allowing the same distance between the tubers as they are in diameter, and the same from them all around to the sides of the pots, potting so that the tubers will be covered about three-quarters of an inch deep. Give free drainage, and a compost of three parts turfy loam, one part leaf soil, half a part sandy peat, and half a part old cow dung or well-rotted manure, and one-sixth of silver sand, the whole well mixed, chopped up rather fine, but not sifted. Place in a house with a temperature of 65° at night, and 70° to 75° by day, keeping moist, and only so until they are growing freely, then water also freely, increasing the supply with the growth. The pots being full of roots shift into pots 2 inches larger in diameter, and when they are established in these, water twice a-week with weak liquid manure. They, revelling in moisture during growth, should be very copiously watered and have a moist atmosphere. Slight shade from bright sun is necessary.

Conifer Seed Sowing—Adiantums Potting, &c. (*W. L.*).—The best time to sow seeds of Conifers is in March or early April, choice kinds in pans in a cold frame to have air abundantly when the seedlings are up; the commoner varieties in open but sheltered positions out of doors. The best time to fill-up bare places on lawn by sowing grass seeds is early in April in showery weather. Adiantums in greenhouse will require to be potted in March, be moderately supplied with water until they are growing freely, and then water requires to be given copiously, never allowing them to want for water without giving it, and at the same time the soil must not be made sodden by needless applications. The plants are benefited by a light syringing morning and evening, and should have shade from bright sun.

Dracæna Propagation (*A Subscriber*).—The plants may be cut off at a few inches above the soil, the upper part or crown formed into a cutting and struck in gentle bottom heat, and the stem may be cut into lengths of about 2 inches, and laid flat on sandy soil in a pan filled to within an inch of the rim with soil, gently pressing them in the soil, and covering three-quarters to an inch deep with soil. Place the pan in a hotbed of about 75° to 80°, and keep moist. Instead of cutting the stems into lengths we lay them in the plunging material of the bed in the stove, and covered an inch or two deep; and when young plants appear about 3 inches high the stem is hared and the plants detached close to it with a knife, potting singly in small pots, and placing in a house with a brisk moist heat, where they soon become established, until which they require shade from bright sun, after which they should be kept near the glass, and have light to secure good colour.

Sea-kale Culture, &c. (*W. P.*).—We presume you intend to blanch it upon the ground with pots placed over the stools, and covered with leaves or litter, or both. The plants should be planted in patches 2 feet apart, and 2 feet 6 inches distance between the rows. The plants should be three in a patch in the form of a triangle, and 6 inches from crown to crown. The best time to plant is in March or beginning of April. Pyramid fruit trees we should plant 9 feet apart in the borders along the walk of the kitchen garden. The middle of February will not be too early to commence with Cucumbers with a bed 4 feet high at back and 3 feet in front, and Melons the middle of March.

Constructing Propagating Pit (*H. K. Q.*).—For a propagating pit there is no need of light in front nor at the ends, in which case you will only require a glass roof, with a 3-feet light in the centre at the highest part; you will have sufficient ventilation for propagating: but as you will desire to use the house for other purposes—Melons or Cucumbers in summer and plants in winter—we should have the whole of the upper part of the roof and 3 feet down the roof to open—sliding lights, or they may be hinged and raised by a lever. The middle wall ought to be 9 inches thick, also the back or shed wall, and the front wall until clear of the ground should be 9 inches, and may then be taken up 4½ inches, the height required. The pathway will need to be sunk about a foot to give head-room. For heating so small a house have a stove boiler in the shed, for which you will need a hole sunk to give the necessary level to the pipes. Two pipes will be required for bottom heat to the front border, and these we should surround with rubble, covering them about 3 inches deep with the same, and then have about 6 inches of plunging material for the pots. For top heat you will require four pipes, the pipes 2 inches diameter Six pipes the length of the house and across the ends.

Pteris tricolor Culture (*W. T. F. M. J.*).—It requires a good heat—55° to 65° in winter, and 65° to 75° in summer, with a rise from sun heat and a uniform moist atmosphere, careful watering, and always moist at the roots, but not syringed or watered over the foliage. Young plants are best; after three years they do not thrive well.

Potting Geraniums (*F. J.*).—The plants having filled the pots with roots, pot them before placing in the bottom heat; but if the plants have not good roots place them in the bottom heat before potting, and when well rooted shift into a larger size and return to bottom heat.

Fancy Geraniums Drawn—Chrysanthemum Culture (*A. G.*).—You may cut the plants back and keep cooler, but they will not bloom until late. Do it to the least extent consistent with the forming of compact plants. The stems of the Chrysanthemums ought to be cut off at the bottom. From the base of the stems cut away will be new shoots or suckers coming up; these are what you must depend upon for flowering this year. They should be taken off when about 3 inches long, and potted singly, or three in a small pot, and struck either in a cold frame or a gentle hotbed. Grown-on they will make splendid plants for autumn and early winter flowering. The temperature, 50° to 60°, is not sufficient to have these in good condition during the winter, but if kept rather dry they will grow none the worse in spring. A temperature of 60° to 65° is most suitable. For bulbs the temperature you name could not be better, but they would bloom finer in a temperature of 45° to 50°, but come on more slowly and be later. The Sparaxis will flower in due course, but not for some time yet. Do not bring them on too rapidly.

Wasps (*C. R.*).—We know nothing of the "Asphyxiator." If it suffocates wasps we should think it would similarly destroy rabbits in their burrows.

Twelve Superior Gladioluses (*T. Watson*).—Belle Gabrielle, Charles Dickens, Eurydice, Fulton, Horace, Le Titien, Lord Byron, Madame Fartado, Madame Vilmorin, Norma, Sir J. Paxton, and Milton.

Canon Hall Muscat Grape as a Stock (*Oxon*).—We would not think of working any sort of Grape Vine on this stock, unless by way of experiment. Black Hamburgh would be most likely to succeed on it.

Apples Sweating (*B. G.*).—It is not usual to go over the Apples and rub them with cloth after they are stored on the fruit-room shelves. It is necessary to look over them occasionally and to remove all decaying fruit to prevent it from tainting the sound ones.

Plants in Greenhouse not Thriving (*J. H. F. C. G.*).—The plants, we think, are suffering from some noxious vapour. It may be that of the newly painted house, which a little air left on for a time day and night would soon rectify; but a more likely cause is an escape of gas. The gas boiler has, we presume, a funnel communicating with the external air to carry off the consumed gas fumes. Or there may be an escape at lighting; or there may be a draught down the consumed-gas funnel, bringing down the fumes into the house. It is certain the atmosphere is very impure, and that you will not have any improvement until that is rectified. The floor would be a source of damp, but not of injury to the plants where due regard is had to giving air, and having a gentle heat in dull weather to cause a circulation of air. You may have the floor cemented without injury to the plants.

Zinc Sashbars (*A. A. M.*).—There would not be any emanation from zinc sashbars injurious to plants; at least we have not observed any, and we have to do with both copper and zinc, but they were painted.

Stove for Heating Greenhouse (*Idem*).—You are going from good to bad in seeking to have a stove in place of heating by hot-water pipes. We should keep to the pipes at any rate, and have a stove boiler, which you may have within the house, and with a funnel or smoke-pipe to convey to the external air the noxious products of combustion. Any of those advertising in our columns would supply you with what you require.

Grass for Poultry Run (*A. H. U.*).—As you want a speedy rather than a permanent result, we recommend Pacey's Perennial Rye-Grass alone, which sown early in April will be ready for the fowls in about six weeks. It might be sown earlier, but the growth is not generally good; though, if the spring were mild, you might by sowing early in March use the run in April.

Growing Fruit for Sale (*A Constant Reader*).—It would not do to be over-particular as to locality, though you will need to have regard to a good soil, a pure atmosphere, good supply of water, ready means of obtaining fuel, manure, and direct communication by rail with the places the produce is to be delivered at. Fruit always commands a ready sale in most large towns. For a supply to the northern markets you will need to be south; though you may, if the produce is not to be sent far, need not to be in a warmer part than the market; and if you grow under glass it does not much signify either way, only early and late fruit, especially of Grapes, pay the best. It is probably best for a beginner to take to a place for some time in hand by a fruit-grower, but success depends more upon individual effort, enterprise, and skill than upon any advice and instruction.

Holly Leaves Falling (*E. M.*).—The leaves are probably falling from the trees being injured by the late severe frosts, or they may have sustained injury from being near a smoky town, as we presume you are.

Double Geraniums Leggy, &c. (*J. W. L.*).—The best and only plan to have them dwarf and compact will be to cut them down, making cuttings of the tops, and in future keep them dwarf by stopping and growing near the glass. Some kinds are of strong erect habit, but are not more inclined to grow up tall than the Zonal and Nosegay kinds usually are. Tomtits are, we presume, the blue titmouse, which is very troublesome very often in Pea-growing, which we know of no way to hinder only by a close-meshed net. We have them by the score, and they do not interfere with the Pea crops. In one instance only were we obliged to destroy the birds, and this proved to be an old one taking the green peas to its young. The Celery is probably rotted at the heart by wet, the stalk not being close together, or it may have been occasioned by the slugs eating the stalks and causing decay.

Mushroom-growing Successfully (*A. J. D.*).—After the Mushrooms appear it is not good policy to cover the bed with hay or any kind of covering. Yours probably die or damp-off from being too heavily watered and overhead, also with warmer water than that of the house, which is a prolific source of dying. Mushrooms require an equable temperature and regularly moist atmosphere, as also regular moisture of the beds. With two beds only we command a supply of Mushrooms from October to July, and every day after Christmas, about which time the second bed comes in. Sometimes the beds require to be renewed. You will find an excellent article on Mushroom culture in vol. xxvi., page 288.

Names of Plants (*J. E. S.*).—The specimens were dried up and smashed. (*P. W.*).—Pothos sp.; perhaps a var. of P. scandens. (*W., Langport*).—The creeper is Bousingaultia basilloides; the fruit that of the Black Hickory, Juglans nigra. (*T. S.*).—Eupatorium Weinmannianum, *Regel*; E. populifolium, *D.C.* (*W. C.*).—1 and 2, Davallia canariensis; 3, D. tenuifolia; 4, Adiantum sp.; 5, Asplenium bulbiferum; 6, Phlebodium aureum. We do not name more than six specimens at once. (*T. W.*).—1, Pteris longifolia; 2, Blechnum occidentale; 3, Polystichum aculeatum; 4, Adiantum hispidulum.

Names of Fruits (*An Old Subscriber, Framfield*).—The small Pear is Broompark, and the larger one Prince Albert. (*Junior Carlton*).—No. 1, Cobham or Pope's Apple; 2, Reinette Verte.

POULTRY, BEE, AND PIGEON CHRONICLE.

THE EXHIBITION DORKING.—No. 6.

BY T. C. BURNELL.

Dorking chickens grow and mature faster than any other known variety, and it is for this reason that they are always kept where there is a regular large demand for early chickens of the finest quality. Hamburghs will excel them as layers, but it is very doubtful whether the large size of the Dorking egg does not more than compensate for any deficiency in numbers; and in this as in all other breeds hens vary as layers, but average Dorking hens lay eighty or ninety eggs in the year, besides hatching and rearing a couple of broods of chickens in the most exemplary manner, and notwithstanding all the tall talk to the contrary, I very much doubt if any other breed will do any better. I have heard several complaints this unusually severe winter of people being without eggs; but although I only keep a small number of hens, I have not known what it is to be without them. However, it is on their merits as chickens for the table that Dorkings must rise or fall, and to this I will now confine my remarks.

With prize stock, as with poultry, the desideratum is to produce as large as possible a quantity of the best meat in the shortest possible time—that is, to combine excellence of flesh with early maturity.

What the Shorthorn is to cattle the Dorking is to poultry—that is, not only will this fowl come to maturity sooner than any other, but when matured the principal portion of the meat will be found in the most desirable places—viz., on the breast, wings, and merrythought, instead of on the legs, as is generally the case with Cochins and Brahmas. The advantage this peculiarity gives to the Dorking is very great, and it is for this reason, independently of their white flesh, that they are so much sought after by higglers and dealers; the only fowl which can compete with them in this respect being the French Dorking, the Houdan, but as this variety is a non-sitter it is not generally suited for domestic purposes.

If it is only desired to rear chickens for the table we cannot well hatch them too early in the year, provided they can be kept out of the wet and damp, as the earlier they are the more valuable they will be. But if we hatch out a brood of Dorkings with the hope of finding some prize birds among them, it is very doubtful if anything is gained by beginning too soon.

I never hatch any chickens till February, and often not then. The early birds if not stunted by the cold will doubtless win at the summer shows, and it is for this reason people are so anxious to get them out; but the March and April birds, which have the whole summer to grow in without a check, always make the finest in the end, and it is a common thing to see an April-hatched Dorking winning in November against January and February birds. But not so with Asiatics: it is well known they take nine or ten months to mature, while a Dorking, if pure bred, will be as far advanced at six or seven.

The careful breeder will always like to be certain of having his chickens bred from certain cocks and certain hens, in order to supply on the one side what is wanting on the other, for perfect birds are hardly ever seen except in poultry books. To make sure of this the sexes must be separated in the winter, and the desired birds mated-up again at least a month before we think of setting their eggs.

It is commonly supposed that the strongest chickens are obtained from a cockerel mated with hens, or an old cock mated with pullets. But owing to Dorkings maturing so much earlier than any other breed, this rule I think hardly applies to them. I have certainly bred some of my finest chickens from cockerels and pullets running together, and if the latter are early-hatched birds of the previous year they will be at least ten months old and fully matured, and I cannot see that any harm will ensue. It is not advisable to sit the first few eggs of a pullet, as such, besides being small, seldom hatch; but a March or April pullet will, if well fed, be nearly sure to lay in the autumn, and will thus be to all intents and purposes a hen in February or March, and her eggs may be safely trusted.

I have laid great stress on the Dorking maturing so early, but we must also bear in mind that early maturity means early decay. Dorkings are not long-lived birds, the large show cocks seldom get over their fourth winter. I know several birds in a neighbouring farmyard which are for certain twice that age. However, I am not now speaking about the common barndoor Dorking but the larger bird of the show pen, and I am justified in saying they are short-lived compared with some breeds, as I can hear of no instance of a well-known show cock lasting more than three seasons, while Cochins and Brahmas frequently hold out to five and six. The hens do better, though, and I now know a Dark Dorking hen which has twice won the cup at the Crystal Palace Show, and which is still flourishing and winning, though certainly over eight years old.

It is for this reason—their comparatively short life, that fanciers will not be justified in giving the extraordinarily high prices for Dorkings which Cochins and Brahmas sometimes fetch. We may reasonably expect to have several years' service and many shows out of these latter; but anyone who gives a high price for a Dorking cock, thinking to exhibit and win with him through the season, as is often done in some breeds, will find he is reckoning erroneously, as no Dorking, however carefully attended to, can stand knocking about from show to show, and certainly not for two or three seasons running.

To return to the mating of our birds. If we have an old cock which has not been overshown, and which we desire to use for stock purposes, put him with three or four pullets; but if we have only a nine-months cockerel there will not be the least reason to doubt the probable excellence of his chickens, even though mated with pullets. Besides, we are often compelled to breed from the latter, as it is seldom we can get the old hens to lay soon enough for their eggs to be sat for early chickens. In April and May seven or eight hens may be allowed to one cock, but in the early months it will be better not to allow more than four. When the birds have once been mated-up they should not be separated, as it is hopeless to expect to rear prize chickens if we keep on knocking the parents about from show to show. I should like to see the great winter shows end with December, when we could exhibit our best birds two or three times and afterwards breed from them, but I am afraid there is but very little chance of this coming to pass.

The eggs for sitting should be collected every afternoon, and if they have to be kept should be stored in chaff or bran, and turned every day. I do not believe there is any advantage to be derived from storing the eggs large or small end up, and most certainly a hen if she steals her nest does not do so, but eggs cannot be left for three or four days in one position with impunity. I should not care to sit eggs more than ten days old, and if they have to go a journey they should certainly not be more than two or three. If we wish the chickens to hatch out together the eggs should be as nearly as possible of the same age, as the staler the eggs are the longer will the chickens be in coming out. Dorking eggs are generally very large, and ten or eleven are quite enough for any hen to cover; in fact, nine will be better in the winter months.

The nests may be made either on the ground, in a manger, or in any other convenient place which the hen may select. But if we desire to rear a large number of chickens it will be found more convenient to set the hens in boxes or hampers with lids to each, and to take the hens off, and to put them on again every day after feeding—the plan which is generally adopted by keepers, as by this means we shall avoid disapointment caused by the stupidity of the hens in getting on the wrong nests.

CANTERBURY POULTRY EXHIBITION.

As a visitor and exhibitor at the late Show, I can fully corroborate the evidence of your reporter respecting the delay of auction, and the late hour of affixing many of the prize cards. When the hour of sale is distinctly stated in the schedules, one reasonably expects such to take place at the stated hour; and as many of us are, from distance and want of time, unable to be present the second day, it is certainly a disappointment. However, I feel certain the Committee and Secretary will take the hint in a friendly spirit, and endeavour in future to avoid delays, unpleasant to all parties.

But while commenting upon the failings of this Society, allow

me to do them the justice due in other respects. The birds were sent home in really good condition. White birds remarkably clean, considering they were in pairs. I must also acknowledge the special prize cards and honorary mentions posted a few days after the Show to successful exhibitors. This, I think, is most courteous and businesslike on the part of the Committtee. Other societies would do well to make a note of this, for it is seldom one gets the prize cards, and when they do happen to be put in the baskets, they are generally so soiled before they reach their destination that one has no pleasure in showing them to a friend. The prize money was also paid a few days after the Show. So, considering the Canterbury Exhibition of 1874 as a whole, I think exhibitors have much to be thankful for, and I for one offer the Committee and Secretary my most sincere thanks, and in conclusion, say, as a suggestion, Keep the entries still confined to the four counties. One thousand entries is surely large enough, and much too large for the Corn Exchange, and, as a contemporary justly remarks, it would in many cases be better for all parties that more of our exhibitions were local, or confined to a few counties. In our large exhibitions I maintain that some of the classes are simply a monopoly for a few exhibitors. Why not introduce champion classes, as at dog shows? This would certainly create more fanciers, and offer some hope for many who have a true heart but a slender purse. Encourage all, but give some encouragement, nay, special encouragement, to the artisan and mechanic. Many of us must have some hobby; encourage all. It is better to spend a few spare shillings in this way than in the gin palace or beer shop, and I can conceive nothing more interesting, and may say even profitable than chickens.—Brahma.

SANDFORD *v.* HOWARD AND NICHOLS.

On Tuesday, the 19th, Dr. Sandford sued Messrs. Howard and Nichols, the Secretaries of the Great National Poultry Show, for £2 5*s*., the amount he had paid as entry fees at the last Crystal Palace Show, and for 10*s*. expenses of carriage. The case was heard in the Westminster County Court. Dr. Sandford stated that he arrived at the Crystal Palace on the Saturday evening prior to the Show, that in the first instance he was greeted not very civilly by one of the officials, but this was afterwards explained, and having been informed that some exhibitors had been allowed to enter the building for the purpose of penning their birds, he inquired for one of the Secretaries for the same purpose. He saw Mr. Howard, who after some hesitation refused to allow him to enter, and eventually said he would neither admit him nor his birds. In cross-examination Dr. Sandford admitted that he had told Mr. Howard that he had told a falsehood, and that in reply to that, Mr. Howard stated that after such an insult he should hold no further conversation with him. Dr. Sandford called a witness, who corroborated some portion of his evidence, but differed with him with regard to Mr. Howard's replies.

On the other hand Mr. Howard stated that Dr. Sandford had complained to him in the first instance with regard to the incivility of the servant, and that he had apologised to Dr. Sandford and told him he thought it was one of the workmen; that he then asked him to be allowed to see his birds penned; that he explained to Dr. Sandford that he could not allow any exhibitor to enter for the purpose except under the supervision of one of the officers, and that it was so late, it being nearly ten o'clock, it would be almost impossible; that Dr. Sandford had accused him of telling a falsehood, and that he then declined to speak to Dr. Sandford again. He denied that he had refused to admit Dr. Sandford's birds, or that in answer to Dr. Sandford's threat that he would summon him he replied that "he could stand all that." Mr. Wilson corroborated Mr. Howard's statement. Several other witnesses were in attendance, but the Judge decided that it was unnecessary to go any further, and dismissed the summons with costs against Dr. Sandford.

UNDIGESTED FOOD IN FOWL'S CROP.

It may interest some of your readers who keep poultry to hear how I operated on a couple of birds which were suffering from an accumulation of food in their crops, caused either by general debility or local disorder, but I do not pretend to state the cause.

The birds were in a most pitiable condition, with crops very large and hard. My man securely held the first bird, which was a young Spanish cockerel; I made an incision with a sharp penknife through the outer and inner skins of the crop about 1 inch long, and with a blunt pointed stick probed out the undigested corn and maize, which was about a cupful. After sponging the wound with warm water I proceeded to sew up, first the under membranons skin, and lastly the outer.

"Young Tom" stood the knife very well, and so did the next patient, a middle-age hen, which, by-the-by, was very weak, having had the attack longer than the other.

A fortnight has now elapsed and they are both doing remarkably well. We feed them on soft food, a little bread and milk occasionally. Perhaps some of your readers can give me further information, and if there is a less radical remedy, which I must say they stand remarkably well, and appear greatly relieved after the operation.—R. G. P., *St. Peter's*.

[Hard crop is believed to arise from debility of the organ and we have known it removed by pouring a tablespoonful of gin down the fowl's throat.—Eds.]

MAIDSTONE POULTRY SHOW.

This was held on the 13th and 14th inst. We gave the prize list last week. The quality of the birds was certainly very good indeed, quite surpassing all previous shows in this town. The birds were well fed and attended to, and kept very clean; the Show was well arranged, and the place looked bright and fresh. We saw on many of the pens placards stating the birds were fed and reared on Spratt's patent food. Well, this is all very well now and then, but it is growing quite a nuisance. The fronts of the pens are none too large, and these cards placed in the central part of them hide to a great extent their inmates. We hardly attend a show now but we see these cards placed on nearly every pen. They seem to be put up in the most haphazard way. It would seem as if the party who goes about with them had a list of the names of all those who have at any time purchased this food, and then on all the pens exhibited by these purchasers the cards are placed. To our own knowledge these cards were placed both here and at Bristol on pens which had never tasted a crumb of this food in their lives. We only mention this *en passant*, in no way depreciating the food, for we find it indeed most valuable, but simply because the cards do help to prevent the birds being seen, apart from the untruth which they sometimes point to.

Coloured *Dorkings* came first, and a wonderfully good class they were. The first and second were fine large-bodied birds, and well shown. Third also good. 2 (Stratford) contained a beautiful cockerel, the bird which won fourth at Oxford, but he is rather small. 9 (Greenhill) contained a splendidly-coloured hen. Silver-Greys were a fair lot, and the winners well placed, one exhibitor sweeping off all three prizes. White Dorkings were also admirable. The first were an easy win, the cockerel being especially good. The second hen was large and neat in comb; third a nice hen with good feet. Buff *Cochins* brought seventeen pens. The first-prize pen had a charming pullet, large and good in shape; but we liked the second-prize cockerel best. They were, however, both good pens. Third were smaller, but good in colour. 37 (Dowker), a fine-coloured pullet. 40 (Hawkine), a small good-shaped pullet, but which will never make a large hen. In the next Cochin class, the Whites which won first won the £10 10*s*. champion cup for the best pen of any breed in the Show. The cock was very large and good in colour and shape, and the hen well feathered. Mr. Woodgate's other pen in this class (53) was empty, as the pair entered were claimed at Bristol for £40. The second and third prizes went to good Partridges. 48 (Watchnrst), a fine White cock, but horribly yellow. *Spanish* were not much save the winners. The first hen was a beauty, as good as any we have seen out this season. The second cockerel was a fine bird. 58 (Francis), a good pullet. *Brahmas* had two cups, one for Dark and one for Light. The majority of the pens seemed badly matched, and many looked quite seedy. The cup Darks were good, the cock of good shape and carriage, but the hens a dirty brown, though well pencilled. Second nice chickens. Third cock capital carriage, but a little too straw-coloured on his back. 69 (Lake), a fine pullet. Lights were also good, a good pair of chickens winning first, but a little too small. Third very good old birds. 94 (Boissier), much quality, but wanted washing. 97 (Stevens), a fine pullet, and 103 (Hawkins), a well-shown old cock and a smart pullet. In *Game*, Black-breasted and other Reds, Brown Reds won first and second, and Black Reds third. The cockerels were all better than their fair companions. The first especially was more worthy of a better hen. 111 (Warde), a good cockerel. 122 (Foster), a fine Brown Red cockerel. In the next class Duckwings won all the three prizes. The first cockerel very smart and stylish, with a beautifully coloured hen; second also very good. 128 (Foster), a fine pair of Piles of beautiful colour, but the cock very badly dubbed. Single Game cocks were pretty good. First a good Black Red cockerel, and cheap at catalogue price of £4 4*s*.; second a smart Brown Red; third a middling Black Red. *Hamburghs* were good classes on the whole. Mr. Long walked off with four of the five prizes. The first Golden-spangles were very rich in colour and markings; second a nice pen too; third only fair. In Silver-spangles the first only were up to the mark, though the third pullet was well marked. The winning Golden-pencils were good and well placed; the first cockerel very smart. The Silver-pencils were capital. First won from condition, the second cockerel having caught a slight cold *en route*; third a nice pair, with pullet very evenly marked. *Houdans* a most splendid class. The first were very large and heavy and good in colour, a pair which look as good for the breeding as the show pen; second nice large birds; and third a fine old cock, but a little

unsteady on his legs. 166 (Mansel), a pair of well-grown chickens. 169 (Lake), a good hen. In the Variety class Black Hamburghs won first, Crêves second and third. We think almost the second should have been first, they were so immense in size and grand in shape and colour, though the first Black Hamburghs were very smart and good. Third, Crêves, fine chickens. 185 (Kitchin), very well-coloured Brown Leghorns in good condition. 188 (Nott), dirty but large Guinea Fowls. Game *Bantams*, only the winners were good. The first, Duckwings, were smart chickens; and the second, Black Red cockerel, a beautiful bird. In the Variety Bantam class good White-booted won first, the cock of exquisite colour, but the pullet a little too big. Second fair Sebrights; third nice Japanese. 220 (Ware), good Blacks. 221 (Stickings), a nice Black pullet; 226, fair Blacks, cheap at entered price, 30s.

Aylesbury *Ducks* were very good, but only four pens entered. Rouen Ducks were capital, the first being grand in colour and of very fair size. Pens 232 and 233 (Harvey), two capital pens. In the Variety Duck class Carolinas won first, a very nice pair; second, dirty White Muscovies; third, very small White Calls, but the Duck had one tiny black mark on her beak. *Geese* were good, the winning Toulouse being large and weighty, the first winning their place well. 248 (Stratford), very beautiful White Chinese. *Turkeys* were wonderful. We never saw six better pens. The first won easily, but the second, third, and pen 253 (Warde) were very near each other. The third contained a smaller hen, but the cock's colour was something quite exquisite.

The Selling classes contained many good and cheap pens. The winners in cocks were Game, Light Brahmas, and White Cochins; in hens, Dark Brahmas, White Cochins, and Partridge Cochins; and in cock and hen, Spanish, Crêves, and Houdans. We believe the sales were very few, and hardly any birds changed hands. The first Buff Cochins, however, were speedily claimed for £8, the hen alone being worth the money.

The poultry awards gave the greatest satisfaction, Mr. Teebay picking-out the winners so deservedly that even the vanquished were obliged to hold their peace. We were much pleased to see this most worthy north-countryman down so far in the southern counties.

TUNBRIDGE WELLS POULTRY SHOW.

This Show was held on the 21st, 22nd, and 23rd inst. in the Riding School. The entries were more than could have been expected, and the building hardly large enough for their accommodation; still the arrangement was generally so good, the alleys between the pens so broad, and the building so well lighted from above, that in spite of the pens being arranged three tiers high one could get a fair view of the majority of them. The quality of the birds was in most classes very good, and we have seldom seen so large an attendance of visitors at any show.

First on the list came Coloured *Dorkings*, a splendid class of sixteen pens. First prize and cup for the best pen of Dorkings justly went to Mr. Parlett's magnificent pair, model Dorkings all over, and birds which we have before admired. The second-prize birds were by no means equal to the first, the cock a good dark bird, but white in earlobe. Third, a fine sprightly old cock, but the hen very light in breast-colour. Mr. Lingwood's commended pen was fine; we suppose the cock's defective face pulled them down. Pen 2 (Trist) contained an immense cock, but strangely dark and with a Minorca look. Whites were few but good. Mr. Cresswell's first-prize pen contained a very young and promising cockerel. The cock in the second-prize pen was remarkable for handsome comb and tail. The class for Any other variety Dorkings was not a success. First were Silver Greys; second small but pretty Cuckoos. *Cochins*.—Buffs were the largest class, Whites the best. In size the Buffs were good, but there were a large number of badly-coloured birds. First were a fine and good cock, a well-shaped fine hen, but not sound in colour. The second cock was broad and well-feathered, but slipped in wing, and with neck-hackle rough and frizzly. On the whole we liked the third-prize pen the best; the hen showed a patch of light feathers on the back, which must, we suppose, have pulled them down. In the class for Partridge or Black all the prizes went to the former variety. The first and second cocks were good in colour, but under-feathered; the third looked to us the best shaped bird, but he was mated with a pale indistinctly marked hen. The Blacks were all poor: one pen contained a cockerel with admirable pea comb; we wonder how Brahma enthusiasts would account for this phenomenon in an otherwise correct Cochin. Mr. Woodgate's first and second-prize White, to the former of which the cup for the best pen of Cochins was awarded, were marvellously fine birds; the first cock a perfect though symmetrical giant. The third-prize pen contained a nice hen. Dark *Brahmas* filled twelve pens. Mr. Lingwood's pair which won the cup were almost faultless, the hen perhaps a little brown on the back, but beautifully pencilled on the breast. Mr. Ansdell's two pairs arrived late; one of them would undoubtedly have figured in the prize list had they been in time, though they did not come near the cup pen. In Lights Mr. Lingwood was again first with an excellent pair. In the second-prize pen was a very yellow cock, bad in comb, but mated with a fine and broad hen. In the third-prize pen, too, the cock was tinged with yellow, but another excellent partner brought them into the prize list. The class was large, and as a rule the hens were better than the cocks. In *Spanish* the winners were good, the first pen particularly so, which took the cup for the best birds in four classes. Second also nice birds. In the third pen was a cock with magnificent face, but nearly blind from its development. *Houdans* were only fair. The first-prize pair were well placed. In the second-prize pen were a tall thoroughly French cock, and a hen with miserable tuft. Third were too dark for our fancy. *Crêves* were a small class; the first and second-prize pair magnificent; the third only fair. *Hamburghs* were good throughout. It is seldom that such a collection is seen in the south of England. We fancy that southerners are beginning to appreciate these lovely birds. The first pair of Golden-spangled were super-excellent, and carried off the cup for best pen of Hamburghs. The first Silver-spangled were also good, and the prize birds all well placed, though we thought the highly commended pair quite as good as the third-prize. Golden-pencilled numbered nine pens. Mr. Cresswell's first-prize cockerel was a superb bird. Mr. Pickles' second-prize pullet, though pale in colour, was finely barred. Silver-pencilled were hardly so good. We admired the first-prize cockerel and the second-prize pullet much. The third-prize pen of Blacks were good, the rest of the class poor.

Game had four classes. The gems of the collection were Mr. Pope's Black Red—faultless birds, combining the richest colour of the old-fashioned birds with the elegance of the modern type. They obtained the cup for the best pen of Game in the Show, and the hen also won the piece of plate for the best Game hens; the first Duckwings were also remarkable birds. *Polish* were a singularly good class. Mr. Edwards's first and third-prize White-crested Blacks were such birds as one seldom sees; the first cock by far the best, but we thought the third hen rather the best of the two. Second were Silvers; the hen a grand bird, very superior to her partner. We thought much of Messrs. Silvesters' unnoticed Golden; we suppose the quantity of white in the hens' tuft went against them. Pen 193 (Reeves), highly commended, were also good Golden. In the Variety class first went to a grand pair of Malays, second to lovely Silkies; we thought them as good as any we have ever seen; third nice Black Minorcas. There were six Selling classes for large breeds, including many excellent birds, for which there seemed unfortunately but few purchasers. Amongst them we specially noticed Mr. Woodgate's first-prize pair of White Cochins, a nice pair of Dark Brahma hens shown by Mr. Lawther, and a grand Dorking cock shown by Mr. Cheesman, a cross apparently between the Silver-Grey and Dark varieties. *Bantams* had five classes, three for Game. These were fairly filled, but hardly by birds of the highest type. The Black Bantams were excellent; the first-prize pair brilliant in colour, but the cockerel had his tail too much thrown back. In the class for Any other variety exquisite Silver Sebrights were first, and took cup for the best pen of Bantams; Golden Sebrights second; fair White-booted third. The Local class were put in so elevated a position that we could not attempt to examine them.

Aylesbury *Ducks* were not remarkable. Rouens an immense class, the noticed pens all good. Messrs. Sainsbury and Kellaway divided the prizes in Black East Indians. Carolinas, Mandarins, and tiny White Call Ducks were in the third-prize pens in the Variety class. The class for *Geese* was interesting, as containing several of the rarer varieties—viz., Sebastopol, Grey, and White Chinese. Mr. Warde's first and second-prize *Turkeys* were magnificent, the cocks showing the gorgeous hues of the American variety.

Pigeons.—The majority of the Pigeon classes were well filled. As a rule, the winners were excellent, but there were, of course, some poor specimens among the unnoticed. *Pouters* were fair, Mr. Gill taking three out of the four prizes. In *Carrier* cocks the winners were both Black, and splendid birds; we much admired Col. Hassard's first-prize Dun hen. In *Tumblers* Mr. Ford took first with an Almond and second with an Agate, both pretty birds. Mrs. Lee sent two Blue Beards instead of one; good birds, but of course put out by the mistake. In *Barbs* the first-prize bird was the only remarkable one. The *Jacobin* class was well filled. First went to a White, we presume for its colours' sake, for the second, a Red, was far better in hood, form, and size. The first *Fan* was a sweet little bird. A good Blue *Turbit* took first in a class of eleven, a rich Yellow second. We almost preferred Mr. Cresswell's highly-commended Red to his second winner. *Owls* were a large class, English and foreign being mixed. First was a neat White African, second an English Silver. The first Long-faced *Antwerp*, a Silver Dun, was a very well-coloured bird. In the Any variety class a Black Trumpeter was first, and a Blue-spangled Fairy second, an excellent Archangel being unnoticed.

We were glad to see so large a staff of Judges. The awards seemed to give almost universal satisfaction, which we think would be more generally the case if judges always had a practicable amount of work allotted to them. No man can satisfactorily make awards when he knows that he must hurry through the work to get it over by a given time. We congratulate the energetic Secretary on the great success of his first attempt, and upon the prompt way in which the awards were posted up and the prize list brought out.

DORKINGS.—*Coloured.*—1 and Cup, F. Parlett, Great Baddow, Chelmsford. 2, R. Cheesman. 3, T. Brown. *hc*, H. L. Trist. *c*, H. L. Trist; L. G. W. Stratford; H. Humphrey; G. W. Greenhill; Henry Lingwood, Barking, Needham Market.

DORKINGS.—*White.*—1, O. E. Cresswell, Feltham. 2, L. G. W. Stratford. 3, J. Harris.

DORKINGS.—*Any other variety.*—1, Mrs. Lee. 2, J. H. Putney.

COCHINS.—*Cinnamon or Buff*—1, Mrs. A. Christy. 2, E. Winwood. 3, A. Darby. *hc*, W. White; Henry Lingwood.

COCHINS.—*Partridge or Black.*—1, T. W. Anns. 2, Capt. F. G. Coleridge. 3, J. A. Sleep.

COCHINS.—*White.*—1, Cup, and 2, R. S. S. Woodgate, Tunbridge Wells. 3, Mrs. Wild.

BRAHMAS.—*Dark.*—1 and Cup, Horace Lingwood, Creeting, Needham Market. 2, F. G. Cotterell. 3, J. Watts, King's Heath, Birmingham. *c*, Dr. G. Angier; J. W. Trowbridge.

BRAHMAS.—*Light.*—1, H. Lingwood. 2, F. G. Cotterell. 3, P. Hainss. *hc*, Rev. M. Rice; H. M. Maynard; F. Cheshire; Capt. W. Saville. *c*, H. Steed; S. Pitt; H. Stephens (3).

SPANISH.—1 and Cup, Miss E. Brown. 2, J. Francis. 3, H. Brown. *c*, P. Roffey.

HOUDANS.—1 and 3, W. Dring, Faversham. 2, J. W. Moyle. *hc*, M. Sandford. *c*, R. A. Boissier.

CRÈVE-CŒURS.—1 and 2, W. Dring. 3, T. Ledger.

HAMBURGHS.—*Golden spangled.*—1 and Cup, T. P. Carver. 2, H. Pickles, Earby, Skipton. 3, J. Long. *Silver-spangled.*—1, H. Pickles. 2, J. Long. 3, Miss E. Kingsnorth. *hc*, N. Barter.

HAMBURGHS.—*Golden-pencilled.*—1, O. E. Cresswell. 2, H. Pickles. 3, H. M. Maynard. *hc*, J. Long. *Silver-pencilled.*—1 and *hc*, B. Norton. 2, J. Long. 3, H. Pickles *c*, N. Barter.

HAMBURGHS.—*Black.*—1 and 2, J. Long. 3, — Pickles. *hc*, H. Thomas; R. A. Boissier.

GAME.—*Black Red.*—Cup and 1, W. J. Pope. 2, W. H. Stagg. 3, J. Jekan. *hc*, W. Foster; J. Mason. *Brown Red.*—1, W. Foster. 2, J. Jekin. 3, H. Ritchie. *vhc*, T. Mason. *hc*, F. Warde (2). *c*, J. Cock. *Duckwing.*—1, J. Mason. 2, T. Whitaker. 3, E. Winwood. *hc*, J. Chittenden. *Any variety.*—1 and *c*, G. H. Fitz-Herbert. 2, W. Foster. 3, H. Ritchie. *hc*, J. Croote, jun.

POLISH.—1 and 3, T. P. Edwards. 2 and *c*, G. T. Lenny. *hc*, J. Long; E. T. Reeves.

ANY OTHER VARIETY.—1, S. Elliott, jun. 2, R. S. S. Woodgate. 3, J. Croote. *hc*, — Tample; Rev. N. J. Ridley.

ANY BREED.—1, A. Arnold. 2, J. Harris. *c*, G. Ware; J. Harris; J. K. Pain (2).

SELLING CLASS.—*Dorkings, Brahmas, and Cochins.*—1, R. Cheesman. 2, J. K. Lawther. 3 and *vhc*, S. Pitt. 4, G. W. Greenhill. *hc*, L. G. W. Stratford; A. Arnold; R. Cheesman; Mrs. Dressing; H. Mills; E. Haywood (2). *c*, R. A. Boissier; J. F. Bates.

SELLING CLASS.—*Dorkings, Cochins, and Brahmas.*—1, R. S. S. Woodgate. 2, H. Humphrey. 3, E. Haywood. 4, J. Harris. *vhc*, A. Arnold; H. Mills; G. W. Petter; E. Haywood. *hc*, L. G. W. Stratford; C. S. Chantler; H. Stephens; W. Vidler; R. Cheesman; W. J. Russell; E. Haywood; G. J. Lenny. *c*, H. Steed.

SELLING CLASS.—*Bantams.*—1, W. S. Marsh. 2, A. J. Radford. 3, Mrs. J. Longe. 4, J. Boney. *hc*, Mrs. W. N. Lister; R. S. S. Woodgate.

SELLING CLASS.—*Any other variety except Bantams.*—1, E. Haywood. 2, J. Francis. 3, J. Cock. 4, J. Chittenden. *hc*, R. J. Foster; D. W. J. Thomas; N. Edghill.

SELLING CLASS.—*Any other variety except Bantams.*—1, W. Dring. 2, H. Stevens. 3, J. Honey. 4, J. T. Parker. *hc*, E. Heywood.

SELLING CLASS.—*Any other variety except Bantams.*—1, J. K. Lawther. 2, Miss E. Brown. 3, W. Dring. 4, R. S. S. Woodgate. *hc*, Miss E. Mansell; D. W. J. Thomas; W. Foster; E. Haywood *c*, Miss E. Mansell; T. H. Smith.

GAME BANTAMS.—*Black Red.*—1, E. Payne. 2, W. S. Marsh. 3, T. Randall, jun. *Brown Red.*—1, S. & J. J. Stephens. 2 and 3, V. Sandford. *Any other variety.*—1, A. J. Radford. 2, W. White. 3, M. V. Sandford. *c*, J. Windle; G. H. Nutt.

BANTAMS.—*Black or White Clean-legged.*—1, C. W. Gedney. 2, J. Watts. 3, G. Vigers. *hc*, G. Ladd; C. Reed. *c*, G. Ladd. *Any other variety.*—1 and Cup, Mrs. Lee. 2, J. K. Lawther. 3, W. S. Marsh. *hc*, A. A. Vander Meersch. *c*, R. S. S. Woodgate; Mrs. J. Longe; G. Ramsden; C. Judson.

LOCAL CLASS.—Cup and *vhc*, R. Ritchie. 2, J. Francis. 3, H. Stephens. Extra 3, J. K. Lawther. *hc*, H. Stephens (2); R. Sheppard. *c*, J. W. Robinson; N. Edghill.

DUCKS.—*Aylesbury.*—1, N. Edghill. 2, F. E. Arter. 3, G. Ware. *hc*, Mrs. W. Dombrain. *c*, J. Merriman. *Rouen.*—1, F. Parlett. 2, F. Warde. 3, G. Ware. *hc*, Earl of Abergavenny; F. E. Arter. *Black.*—1 and 3, J. W. Kellaway. 2 and *hc*, G. S. Sainsbury. *Any other variety.*—1, R. Wilkinson. 2, W. Boutcher. 3, R. S. S. Woodgate.

DUCKS.—1, G. Ware. 2, A. Arnold.

GEESE.—1 and 2, G. Ware.

GEESE.—1 and 2, G. Field. 3, G. H. Fitz-Herbert. *hc*, J. R. Thomson (3).

TURKEYS.—1 and 2, F. Warde. 3, Mrs. A. Mayhew. *vhc*, Rev. N. J. Ridley. *hc*, Earl of Abergavenny; Marchioness Camden.

PIGEONS.

POUTERS.—1, 2, and *hc*, M. H. Gill.

POUTERS.—1, M. H. Gill. 2, F. Winser. *c*, A. Arnold; M. H. Gill.

CARRIERS.—1, H. M. Maynard. 2, Col. F. Hassard. *hc*, M. H. Gill. *c*, J. Ford; G. H. Nutt.

CARRIERS.—1, Col. F. Hassard. 2 and *hc*, M. H. Gill. *vhc*, H. M. Maynard. *c*, J. Ford.

DRAGOONS.—1 and 2, L. Whitehead. *hc*, H. W. Webb; W. V. & J. M. Longe. *c*, E. Durrant; T. Marsh.

DRAGOONS.—1, E. Durrant. 2, J. Chandler.

TUMBLERS.—1 and 2, J. Ford. *vhc* and *hc*, Mrs. Gill. *c*, E. W. Bunney; Mrs. Gill; J. S. Simpson.

BARBS.—1, H. M. Maynard. 2, L. Allen.

JACOBINS.—1, A. A. Vander Meersch, Tooting. 2, O. E. Cresswell. *hc*, H. W. Webb; G. H. Nutt.

FANTAILS.—1 and 2, O. E. Cresswell. *hc*, J. F. Loversidge, Newark; H. M. Maynard. *c*, J. F. Loversidge.

TURBITS.—1 and 2, O. E. Cresswell. *hc*, — Gregory; O. E. Cresswell. *c*, C. A. Crafer; A. G. Avenell.

OWLS.—1 and 2, T. G. Spruntt. *vhc*, — Gregory. *hc*, J. S. Simpson; C. Blunden. *c*, L. Allen; W. V. & J. M. Longe.

ANTWERPS.—*Short-faced.*—1, E. F. Wilson. 2, W. S. Marsh. *hc*, E. F. Wilson; J. T. Theobald.

ANTWERPS.—*Long-faced.*—1, E. F. Wilson. 2, C. Mills. *hc*, W. S. Marsh; J. T. Theobald; J. B. Russell. *c*, F. G. Moore.

ANTWERPS.—*Homing.*—Cup, F. G. Moore. 2, G. H. Nutt. 3, T. G. Ledger. *vhc*, J. F. Bates. *hc*, P. J. Cheffins; A. Heath (2); S. Le Blanc Smith; H. S. Strange; G. H. Nutt. *c*, Col. F. Hassard.

ANTWERPS.—*Four Working Homing.*—1, J. Theobald. 2, E. F. Wilson. *hc*, J. W. Barker; Capt. G. Edwards; A. Farndon; E. F. Wilson; G. F. Lenney; G. H. Nutt.

ANY OTHER VARIETY.—1, A. A. Vander Meersch. 2, G. H. Nutt. *hc*, H. W. Webb; L. Allen (2); G. H. Nutt (2).

SELLING CLASS.—1, A. G. Avenell. 2, A. A. Vander Meersch. *vhc*, J. Ford. *hc*, G. T. P. Pointer (2); E. Durrant; C. Blunden; H. M. Maynard; A. G. Avenell; E. A. H. Alderson (2).

SELLING CLASS.—1, J. Ford. 2, A. G. Avenell. *hc*, G. T. P. Pointer; A. T. Nye; A. A. Vander Meersch; H. M. Maynard.

ANY BREED.—1, G. Ware. 2, J. Harris.

CAGE BIRDS.

NORWICH.—*Clear Yellow.*—1, J. Adams. 2, T. Willsher. *hc*, J. Caplin; J. Adams; G. H. Nutt. *c*, W. Smith. *Clear Buff.*—1, J. Caplin. 2, J. Adams. *hc*, J. Adams; W. Smith. *c*, J. Caplin. *Any variety.*—1, J. Caplin. 2, G. H. Nutt. *vhc*, J. Caplin; G. H. Nutt. *hc*, J. Adams; W. Smith.

BELGIAN.—1 and *hc*, J. Caplin. 2, G. H. Nutt. *c*, J. Pyman.

MULE.—1, J. Caplin. 2, E. W. Lulham. *hc*, T. Willsher; J. Adams; W. Smith; J. Moore.

LINNET OR FINCH.—1, T. Willsher. 2, Knight & Spencer. *hc*, G. Farmer. G. & J. Mackley; E. W. Lulham.

BRITISH BIRDS.—*Any other variety.*—1, G. Crack. 2, *hc*, and *c*, G. H. Nutt. Extra 2 and *vhc*, T. Willsher.

FOREIGN BIRD.—*Any variety.*—1, G. H. Nutt. 2, J. F. Bates.

SELLING CLASS.—1, J. Caplin. 2, Knight & Spencer. *hc*, J. Caplin; G. H. Nutt (2); W. Smith. *c*, G. & J. Mackley (2); J. Adams; G. H. Nutt (2); W. Smith.

PARROTS.—1, Mrs. E. Durrant. 2, W. Marsh. Extra 2, Mrs. Jocylyn. *hc*, L. Allen.

RABBITS.

LOP-EARED.—1, J. Cranch. 2 and 3, A. Stedman. *vhc*, A. J. Corder. *hc*, H. Soper; E. Frost; G. H. Nutt. *c*, G. H. Nutt.

HIMALAYAN.—1, E. W. Bunney. 2 and 3, G. H. Nutt. *hc*, J. Hallas.

SILVER-GREY.—1, C. King. 2, J. Hallas. 3, J. Ellis. *hc*, A. Dickson. *c*, A. Dickson; J. Ellis.

ANY OTHER VARIETY.—1, R. J. Foster. 2, B. Greaves. 3, R. A. Boissier. *hc*, J. T. Billet, jun.; A. Stedman; G. H. Nutt. *c*, A. Stedman; W. Batchelor; A. Adderley.

ANY VARIETY.—1, C. King. 2, A. Stedman. 3, E. Haywood. *hc*, W. Miller. A. Stedman; C. King.

CATS.

TABBY OR TABBY AND WHITE.—*Short Hair.*—1, E. Baxter. 2, T. Avenell. 3, R. Weekes. *hc*, R. Weekes; W. Spink. *c*, J. Green.

TORTOISESHELL OR TORTOISESHELL AND WHITE.—*Short Hair.*—1, G. W. Kent. 2, Mrs. E. Durrant. 3, W. Elers.

ANY OTHER COLOUR.—*Short Hair.*—1, Mrs. S. Smith. 2, Mrs. Shuckhard. 3, H. Cramp. *vhc*, R. Weekes. *c*, G. Burnell; E. Durrant; W. L. Faulknor.

ANY VARIETY OR COLOUR.—*Long Hair.*—1 and 2, A. Adderley. 3, E. Durrant. *hc*, Miss C. E. Harris. *c*, E. Durrant; G. Collingwood.

LITTER OF KITTENS.—1, E. Durrant. 2, Mrs. Lee.

TORTOISESHELL OR TORTOISESHELL AND WHITE.—1, E. Durrant.

LOCAL CLASS.—*Any colour or variety.*—1 and *c*, Mrs. E. Durrant. 2, Mrs. T. Durrant.

LOWESTOFT SHOW OF POULTRY, &c.

THIS Show was held in the Public Hall on the 20th and 21st inst. This building is remarkably well suited to such a purpose as regards light, &c., but unfortunately is, like all other places at the command of the Committee, far too small for the purpose; and the consequence was, that while the fowls were placed in the best position, the Pigeons were too high for easy inspection, except a few which were placed on the platform, but the cage birds were allotted a snug anteroom on the left-hand of the entrance. The pens were the substantial wooden ones (with bar-iron fronts and slide doors) of the Society, and as well arranged as the room would allow. The feeding, general attendance, and indefatigable exertions of Messrs. Wren, Stringfield, and other gentlemen of the Committee was exemplary, and such as merited better entries than was the result in poultry, which section (with a great increase of classes and cups) was not much in excess in numbers of previous years.

Dorkings.—The winners in both classes good Dark birds, and the whole pretty even. In *Cochins* the first was a great mistake, the second, a cock, being in all respects superior; both were Buff. In hens the first was an immense bird with extraordinary fluff and cushion, but not as heavy on the foot-feathering; but we thought the cup would have been much better placed here. Second a good light Buff, and there were some good local birds in the class. Dark *Brahma* cocks were well placed, and in all a fair lot. In hens Mr. Leno's exquisitely pencilled pullet was first, but we preferred the second, a grand hen by Lingwood, as nearer perfect, the first being sadly out of feather. Pen 45 (Lady Gwydyr) was passed unnoticed, but why we could not tell, for she appeared almost equal to the first in pencilling and colour, and quite as good in other points. With the above exception the whole of the awards were well made. In Light Brahmas Mr. Haines won all with two exceptions, taking the cup also with some capital birds. In *Game* the winners were all Brown Reds, the cup going to a cock of that colour. *Spanish* were very good in both classes, and plainly showed the great care bestowed upon them, but the best birds (Boulton) were too late for competition. *Hamburghs.*—Pencilled were moderate in quality, Mr. Tickner's cup pen of Gold winning easily. Spangles were better, and almost all noticed; and the winners in *French* were all Crêve-Cœurs. In the Variety class Messrs. Silvester won with a capital pen of Gold Polands, securing also the cup. The hen is a wonder. The Selling classes were large, and many capital lots were shown, some of which changed hands. Game *Bantams* were not as good as we usually find them here, and but few pens were

noticed. There were some moderate Blacks, but the hens were superior to the cocks, and there were some very good White pullets shown. In the next class Mr. Leno secured four of the six prizes, as also the cup. Mr. Stringfield showing some of the best Golden Sebrights we have seen for some time, and which might have had a place. *Ducks* were better than we have generally found them in the eastern counties.

Pigeons were a very large entry—nearly double, in fact, of those of any previous year, and the tone of quality of a high order. Carrier cocks were first, and one of the four cups was awarded to a well-developed bird in this class, a Black, and such a bird as, if in some hands, would sharply become the figure-head of the fancy. The second and third were made to Duns, much younger but of good properties; one bird that would otherwise have won was sadly over-trimmed. Hens were good, the winners all Black of good style of head, the awards being made in proportion to the make-up, most of these being noticed. Young Carriers were a very heavy entry, and the whole class noticed, there being scarcely a bird but that had excellent points. The winners all cocks. In old Barbs the first and third were Blacks, but this was not one of the best classes. Reds won in all cases in young Barbs, and they were moderately good. Dragoons were immense classes, which caused no little difficulty for the Judge, there being no less than forty-six entries, and most were marked in some form or other. First came Blue and Silver, in which a Blue hen was first, a black-barred Silver hen second, and a Blue cock third; many others coming very close. The next was an interesting class, almost every shade of colour and style of head being shown, the Horseman style coming out most forcibly in the grand-coloured Grizzles, which as regards colour are in our opinion a sadly neglected variety. The first and second were Yellows; the first a young bird of great merit, and the third a Red of grand colour. In Balds and Beards, first was a neat Bald, second a Blue Beard, and third a Blue Bald Long-face, very perfect in all points. Tumblers, any other variety, were all Almonds, as regards the winners the first being far a-head of the rest. Pouters were a very good class, the first award being made to a Black Pied of very sound colour, long in feather and limb; second was a White cock, very stylish and slim-built; and third a Blue, a little thick but in grand show, and good in all other points. Mrs. Ladd's birds were too late, but several other birds came very close to the winners in quality. Fantails were not a good class, though there were some very good; first and second White, and third Blue. Antwerps with a few exceptions were very poor, but a good Silver Dun Short-face attained the first position. Any other variety was a real good class, first being a Red Magpie of very diminutive proportions, second a Grey Frillback, and third a Blondinette. The Selling class was not large, but good Yellow Dragoons won first and second, Dun Carriers coming third.

Cage Birds were not an extensive show, some of the exhibitors seeming to be afraid of the Messrs. Mackley, but the show was very select as regards quality, and Messrs. Mackley carried off the lion's share; nearly all the specimens were of the hot variety, and most were noticed. In the first four classes the extra prize was given to a four-pointed Jonque Norwich, a very good Crested Norwich receiving another, and the remaining one was given to a pure white Goldfinch Mule of good size and in fine condition. Parrots and Paroquets were all noticed, and were a very interesting class, and in the next was a good Golden Lizard and Zebra Finch as first and second.

The catalogues and prizes attached were got out in excellent style, and were ready within a very few minutes of the Exhibition being completed. The extras for birds will be found in our list though not in the catalogue, owing to a mistake.

DORKINGS.—*Cock.*—1 and Cup, Henry Lingwood, Barking, Needham Market. 2, Miss Crowfoot, Keasingland. 3, F. Parlett, Great Baddow, Chelmsford. *Hen.*—1, Henry Lingwood. 2, F. Parlett.

COCHINS.—*Cock.*—1 and Cup, Henry Lingwood. 1 Local and 2 Local. W. P. Matthews, Gorleston. 2, Lady Gwydyr, Stoke Park, Ipswich. 3, H. Thring, Tamworth. *Hen.*—1, Lady Gwydyr. 1 Local, W. Saunders, Normanstone. 2, M. Leno, Markyate Street, Dunstable. 2 Local, W. P. Matthews. 3, Mrs. C. Bereare, Yoxford.

BRAHMAS.—*Dark.*—*Cock.*—1 and Cup, Horace Lingwood, Creeting, Needham Market. 1 Local, C. Denton, Keighley. 2, Mrs. H. E. Buxton, Flixton. 3, G. S. Pearson, Yarmouth. *hc* and *c*, J. Holmes, Whitecotes. *Hen.*—1, M. Leno. 1 Local, G. S. Pearson. 2, Horace Lingwood. 2 Local, Mrs. H. E. Buxton, Flixton. 3, C. Denton. *hc*, E. Pritchard, Tettenhall; G. S. Pearson; J. Holmes (2).

BRAHMAS.—*Light.*—*Cock.*—Cup, 3, and *c*, P. Haines, Palgrave, Diss. 2, Horace Lingwood. *hc*, P. Haines (3); F. J. Cotterell, Birmingham. *Hen.*—1, Cup, 2, and *c*, P. Haines. 3, F. J. Cotterell. *hc*, P. Haines (2); E. J. Bird, Cawston.

GAME.—*Cock.*—1 and Cup, S. Matthew, Stowmarket. 1 Local, G. Copling, Lowestoft. 2, H. E. Martin, Scalthorpe. 2 Local, J. Jones, Lowestoft. 3, H. Reynolde, Lowestoft. *Hen.*—1, S. Matthew. 1 Local and 3, H. Reynolde. 2, H. E. Martin. 2 Local, J. Jones.

SPANISH.—*Cock.*—1 and Cup, T. Boulter, Clerkenwell, London. 1 Local, W. White, Lowestoft. 2, R. Newbitt, Epworth. 3, E. Brown, Sheffield. *vhc*, J. Leamiog, Broughton. *Hen.*—1, J. Leamiog. 2, E. Brown. 3, W. White. *hc*, E. Holmes; R. Newbitt.

HAMBURGHS.—*Gold-pencilled*—1 and Cup, W. K. Tickner, Ipswich. 1 Local, J. Taylor, Lowestoft. 2, G. & J. Duckworth, Church, Accrington. 2 Local, S. Moore, Lowestoft. 3, J. Long, Bromley Common, Kent. *hc*, A. C. Chamberlain, Swaffham. *Silver-pencilled.*—1, F. Steward, Lowestoft. 2, J. Robinson, Garstang. 3, T. Cropper, Bacup.

HAMBURGHS.—*Gold-spangled.*—1 and Cup, T. Dean, Keighley. 1 Local and 2 Local, H. Reynolds. 2, G. & J. Duckworth. 3, W. A. Hyde, Thurst. *vhc*, J. Robinson. *hc*, W. K. Tickner; H. Reynolds. *Silver-spangled.*—1, J. Long. 1 Local, F. Steward. 2, Ashton & Booth, Broadbottom, Mottram. 2 Local, W. Blanch, Mutford. 3, T. E. Thirtle, Lowestoft. *hc*, J. Robinson; H. Stanworth, Worsthorn. *c*, H. R. Plattin, jun., Fakenham.

FRENCH.—1, Mrs. Wicks, Brigg. 3, H. Feast, Swansea. 3 and *hc*, W. Cutlack, jun., Littleport. *vhc*, Rev. M. H. Beghie, Farnham Rectory, Bury St. Edmunds.

ANY OTHER VARIETY.—1 and Cup, A. & W. H. Silvester, Sheffield. 1 Local, J. Miles, jun., Lowestoft (Andalusians). 2, J. Robinson. 2 Local, W. Knight, Lowestoft (Black Hamburgh). 3, A. Ward, London (Leghorns). *hc*, T. A. Wright, Yarmouth (Black Hamburghs); J. Miles, jun. (Andalusians); J. Robinson; W. Knights (Black Hamburgh); T. L. Nash, Sproughton (Silkies); Miss E. A. Eeles, Southwold (Sultans); T. Dean (Polands). *c*, J. Wilkinson, Shaoforth (Black Hamburghs); Rev. W. C. Safford, Attleborough Rectory.

SELLING CLASS.—*Cock.*—1, W. Carter, Lowestoft (Spanish). 1 Local, W. White (Spanish) 2, W. Knights (Black Hamburghs). 2 Local, T. E. Thirtle (Gold-pencilled Hamburghs). 3 and *c*, H. W. Thirtle (Brahma). *vhc*, W. White (Spanish); T. E. Thirtle (Gold-pencilled Hamburghs). *hc*, W. Brunton, East Dereham (Brahma); Mrs. C. Bernera (Dorking); J. S. Dew, Gamlingay Mills; T. M. Derry, Gedney.

SELLING CLASS.—*Hen.*—1, Miss E. A. Eeles (White crested Poland). 1 Local and *vhc*, G. S. Pearson (Brahma). 2, J. B. Bly, Wisbeach (Silver-spangled Hamburghs). 2 Local, S. Moore (Gold-pencilled Hamburghs). 3, W. White (Spanish). *hc*, C. J. Watson, Norwich (Light Brahmas); W. Brunton (Dark Brahmas); J. B. Bly (Silver-spangled Hamburghs). *c*, T. L. Nash (Brahma).

GAME BANTAMS.—*Cock.*—1 and Cup, W. Adams, Ipswich. 1 Local, W. Robbins, Lowestoft. 2, Capt. F. Wetherall, Doddington, Kettering. 3, R. Newbitt. *hc*, E. Harris, Islington, London; W. Robbins; W. B. Jeffries, Ipswich; R. Newbitt. *Hen.*—1, J. S. Pearson, Great Melton. 1 Local and *hc*, W. Robbins. 2, W. Adams. 2 Local, W. Wood, Lowestoft. 3, R. Newbitt.

BANTAMS.—*Black or White, Clean-legged.*—*Cock.*—1 and Cup, G. B. Francis, Romford. 1 Local and 3, T. E. Thirtle. 2, Milner & Beanland, Keighley. *vhc*, Rev. F. Tearle, Gazeley Vicarage, Newmarket. *hc*, W. H. Robinson, Keighley; R. H. Ashton, Manchester. *Hen.*—1, Wells & Sherwin, Ripon. 1 Local, 2, and 2 Local, T. E. Thirtle. 3, Milner & Beanland. *hc*, T. E. Thirtle; J. Wilkinson; J. H. Law, Birmingham; R. H. Ashton; Rev. F. Tearle.

BANTAMS.—*Any other variety.*—*Cock.*—1 and 2, M. Leno. 3, Miss F. E. Somes, Yarmouth. *hc*, G. Holloway, jun, Stroud. *Hen.*—1, Cup, and 2, M. Leno. 1 and 2 Local and *hc*, W. Stringfield. 3, Rev. F. Tearle.

DUCKS.—*Aylesbury.*—1 and 2, Mrs. C. Berners. 1 Local and 3, F. B. Potts, Wangford. *Rouen.*—1, Rev. W. C. Safford. 2 and 3, F. Parlett. *Any other variety.*—1 and 2, M. Leno. 1 Local, W. H. Norton, Pakefield. 3, E. W. Southwood, Fakenham.

PIGEONS.

CARRIERS.—*Cock.*—1 and Cup, E. Walker, Leicester. 2, W. Sefton, Blackburn. 3, W. G. Hammock. *vhc*, G. Kempton, Islington, London. *hc*, H. Yardley, Birmingham; W. Sefton. *c*, F. Hodgson, Driffield. *Hen.*—1, W. G. Hammock, Ilford. 2, E. Walker. 3 and *c*, G. Kemptoo. *vhc*, J. Stanley, Blackburn. *hc*, H. Yardley; W. G. Hammock; W. Sefton (3).

CARRIERS.—*Young Cock or Hen* —1, W. Sefton. 2, A. Billyeald, Nottingham. 3, E. Walker. *vhc*, E. Walker; C. H. Clarke, Nottingham. *hc*, C. H. Clarke.

BARBS.—*Single Bird.*—1, C. Norman. 1 Local, D. Bedford, Kirkley. 2, Miss F. Seanor. 3, H. Vardley. *vhc*, W. Loveday, Leicester. *c*, A. P. Byford, Ipswich. *Young Single Bird.*—1, J. Stanley. 1 Local, D. Bedford. 2 and *c*, C. G. Cave, Spalding. 3, W. Nottage. *hc*, W. Loveday.

DRAGOONS.—*Blue or Silver.*—*Single Bird.*—1, Cup, and 3, W. Sefton. 2, F. Graham, Birkenhead. *vhc*, A. McKenzie, Liverpool; F. Graham; J. Stanley. *hc*, H. Yardley (2); A. McKenzie; F. Graham (2); J. Stanley; A. Boots, Crewe; W. Sefton. *c*, A. McKenzie; F. Graham; A. Boots.

DRAGOONS.—*Any other colour.*—*Single Bird.*—1, F. Graham. 1 Local, 2 Local, and *c*, A. W. Wren, Lowestoft. 2, L. Whitehead, Drury Lane, London. 3, W. Sefton. *vhc*, A. W. Wren; A. McKenzie; F. Graham (4); A. Preston, Spalding. *hc*, W. Loveday; H. Yardley; L. Whitehead; J. Stanley; A. Preston; W. Sefton (3).

TUMBLERS.—*Balds or Beards.*—*Single Bird.*—1, Cup, and 2, W. Woodhouse, King's Heath. 1 Local, 2 Local, and *vhc*, G. & W. Banna, Lowestoft. 3, A. and W. H. Silvester. *c*, G. S. Farman, Lowestoft; A. A. Vander Meersch, Tooting, London, S.W.; G. & W. Banne.

TUMBLERS.—*Any other variety.*—*Single Bird.*—1, H. Yardley. 1 Local and 2 Local, C. Cowles, Lowestoft. 2, W. G. Hammock. 3, G. Holloway, jun. *hc*, W. Nottage, Northampton; A. & W. H. Silvester (2).

POUTERS.—*Single Bird.*—1, Cup, and 3, H. Pratt, Hampton-in-Arden. 2, H. Thurlow. *vhc*, W. Nottage; H. Pratt. *hc*, H. Yardley; P. R. Spencer; L. Watkin, Northampton; C. H. Byford. *c*, M. G. Hale, Lime Street, London; G. Holloway, jun.

FANTAILS.—*Single Bird.*—1, J. Walker, Newark. 1 Local and 2 Local, W. Wood. 2, J. F. Loversidge. 3, P. R. Spencer. *hc*, J. F. Loversidge (2); F. Aldis, Fakenham; P. R. Spencer. *c*, F. Aldis; J. Walker; Miss E. A. Eeles.

ANTWERPS.—*Single Bird.*—1 and 3, J. Stanley. 1 Local and 2 Local, D. Bedford. 2, F. G. Russell, Blackheath. *hc*, H. Yardley; Miss F. Seanor; A. Bentley, Clement's Lane, London; D. Bedford.

ANY OTHER VARIETY.—*Single Bird.*—1, Miss F. Seanor. 1 Local, G. Cooper, Blundeston. 2, H. W. Webb, Lower Sydenham (Frillbacks). 2 Local, Miss F. E. Somes (Danish). 3, H. Yardley. *vhc*, Miss F. Seanor (2); A. & W. H. Silvester. *hc*, Miss A. E. Eeles (Pigmy Pouters); A. & W. H. Silvester. *c*, C. T. Townsend, Ipswich; T. Cropper (Swallow).

SELLING CLASS.—1, A. W. Wren (Yellow Dragoons). 1 Local, C. Cowles (Blue Balds). 2, G. Lee (Yellow Dragoons). 3, H. Thurlow. *vhc*, A. & W. H. Silvester. *hc*, A. A. Vander Meersch; J. Walker; P. R. Spencer, Hereford; L. Watkin (White Pouters); T. Crooper (Turbits). *c*, J. F. Loversidge, Newark; C. Cowles.

CAGE BIRDS.

CLEAR.—*Yellow.*—1, Provart & Willis, Norwich. 2 and *hc*, G. & J. Muckley, Norwich. Local, W. Haverson, Lowestoft. *Buff.*—1 and 2, G. & J. Mackley. Local, W. Haverson. *hc*, Provart & Willis, Norwich.

VARIEGATED.—*Yellow.*—Extra 1 and 2, G. & J. Mackley. Local, W. Haverson. *Buff.*—1, Provart & Willis. 2 and *vhc*, G. & J. Mackley. *hc*, R. Poole, Maldon; Provart & Willis. Local, W. Haverson.

CRESTED.—Extra 1 and 2, G. & J. Mackley. Local, W. Haverson.

CINNAMON.—1 and 2, G. & J. Mackley. Local, W. Carter. *hc*, R. Poole.

MULE.—Extra 1, G. & J. Mackley. 2 and *c*, M. Flynn. *hc*, R. Poole; G. & J. Mackley.

PARROT OR PARAKEET —1 and *vhc*, Miss A. E. Eeles. 2, Mrs. Wran, Lowestoft. Local, A. Page, jun, Lowestoft. *hc*, T. Roll, Lowestoft (2); Miss F. E. Somes; T. E. Thirtle.

ANY OTHER VARIETY OF BRITISH OR FOREIGN.—1, R. Bishop, King's Lynn (Golden Lizard). 2 and *vhc*, Miss E. A. Eeles (Zebra Finch and Diamond Sparrow). Local, Miss F. E. Somes (Bullfinch). *hc*, Miss F. E. Somes (Bullfinch and Cockatoo); G. & J. Mackley (Goldfinch); Miss E. A. Eeles (Coral-nucck Sparrow and Bengalese Blanc).

SELLING CLASS.—*Single Bird.*—1, Provart & Willis (Ticked Buff). 2, R. Poole (Cinnamoo). Local, W. Haverson (Ticked Yellow). *vhc*, Provart and Willis (Yellow); G. & J. Mackley (Clear Yellow Norwich) *hc*, W. Haverson (Clear Buff); Miss E. A. Eeles (Crested Bronzewing); R. Bishop (Golden Lizard). *c*, A. Boatwright, Bungay (Mulelook); W. Haverson (Ticked Yellow).

JUDGES.—*Poultry:* Mr. R. Teebay, and Rev. T. L. Fellowes *Pigeons:* Mr. E. Hutton. *Cage Birds:* Mr. H. Thurlow, and Mr. E. Hutton.

WHITE DORKING CLASSES AT BRISTOL.—The subscriptions to these were:—Miss E. Williams, £1 1s.; Alfred Darby, Esq.,

£1 1s.; Mrs. Hayne, 10s.; O. E. Cresawell, £1 1s. It may be a satisfaction to the subscribers to know that in my opinion the classes were the best which have been seen for a long time.—O. E. Cresswell.

ASPATRIA (CUMBERLAND) POULTRY AND CAT SHOW.

(*From our own Correspondent.*)

This Exhibition was held at Aspatria on the 20th and 21st inst., and showed considerable improvement over its predecessor of 1874. It elicited entries from noted local and other exhibitors, and some first-class birds were exhibited. The display of *Pigeons* was a very fine one, as also *Canaries* and those useful household pets yclept *Cats*. Amongst the latter a pure white Japanese Cat, the property of Miss Lawson of Brayton Hall, elicited much admiration, and its fair mistress some envy in being the favoured possessor.

Mr. Pickering of Warwick Bridge undertook the responsible onus of judging throughout, a most arduous undertaking, but which he performed very successfully. The following is a list of his awards:—

Game.—*Black-breasted.*—1, J. W. Brockbank, Kirkesanton. 2, J. Rauthmell, Kendal. *Brown-breasted.*—1, J. Brough, Carlisle. 2, W. Barnes, Blennerhassett. *Any other variety.*—1, J. Mackreth, Holborn Hill. 2, J. Langcake, Aspatria. *Any variety*—1, J. Nelson. 2, Chartere & Irving.

Brahmas.—*Any variety.*—1, A. Dickinson, Distington. 2, H. Beldon.

Cochins.—*Any variety.*—1, Capt. G. F. Lyon, Kirkmichael, Dumfries. 2, Mrs. H. Beldon.

Dorkings.—*Any variety.*—1, J. Robinson, Garetang. 2, Miss Knowles, The Priory, St. Bees.

Spanish.—*Any variety.*—1, H. Beldon. 2, H. Wilkinson.

Hamburghs.—*Golden-spangled or Pencilled.*—1, J. Robinson. 2, H. Beldon. *Silver-spangled or Pencilled.*—1, H. Beldon. 2, J. Robinson.

French.—1, Bouch & Armstrong, Aspatria. 2, R. J. Robinson, Ulverston.

Polands.—1 and 2, H. Beldon.

Any other distinct variety (except Bantams).—1 and 2, H. Beldon.

Bantams.—*Game, Black-breasted.*—1, W. Grice, Bootle. 2, J. Hine, Kendal. *Game, Brown-breasted.*—1, W. Atkinson, Kendal. 2, J. Nelson. *Any other variety.*—1, W. Higgin, Ulverston. 2, H Beldon.

Ducks.—*Rouen*—1, J. W. Brockbank. 2, J. Nelson. *Aylesbury.*—1 and special prize, W. Brockbank. 2, Capt G. F. Lyon. *Any variety.*—1, Miss H. Robinson, Wigton. 2, J. Langcake, Aspatria.

Geese.—1, W. Mann. 2, W. F. Wilson.

Selling Class.—1, J. W. Brockbank. 2, H. Beldon. 3, J. Brough, Carlisle.

Local Classes. — *Game.* — Prize, W. Barnes, Blennerhasset. *Dorkings.*—Prize, W. Huggin, Westnewtown. *Spanish.*—Prize, Bouch & Armstrong. *French.*—Prize, Bouch & Armstrong.

PIGEONS.

Carriers.—1, J. & W. Towerson. 2, J. Lowrey, Cleator.

Pouters.—1 and 2, J. & W. Towerson.

Fantails.—2, J. Tremble, Aspatria.

Jacobins.—1, J. & W Towerson. 2, J. Cooke, Egremont.

Tumblers.—1, W. Brydone. 2, J. & W. Oddie.

Nuns.—1, W. Brydone. 2, J. Langcake.

Gwle.—1, W. Brydone. 2, J. & W. Oddie.

Barbs.—1, W. Brydone. 2, E. McKie.

Any other Distinct Variety.—1, J. & W. Towerson. 2, W. Brydone.

Selling Class.—1, W. Mann. 2, W. Brydone.

Cage Birds.—*Canaries.*—*Yellow or Buff.*—1, R. Walton, Silloth. 2, W. Hutton, Longtown. *Marked.*—1 and 2, H. Hodgson, Silloth. *British.*—1, W. Hutton. 2, W. Richardson. *Foreign.*—1, T. Benson. 2, Mrs. J. G. Nelson.

Cats.—*Any variety, to compete for piece of plate.*—1, H. A. Clark, Aspatria. 2, Master T. Graham. *Any variety.*—1 and Special, Miss L. P. Mulcaster, Leicester. 2, J. Ferguson.

NENTHEAD POULTRY SHOW.

That a show of poultry can be found among these wild Cumberland hills is something to be surprised at; but to find birds of the so-called most delicate varieties in the finest condition and bloom, as were the Silver-pencilled Hamburghs bred 1800 feet above the level of the sea, is sufficient to make one take leave of the term "delicate" as applied to at least one variety of poultry; and if this Society has not yet been able to achieve any great feat as regards entries on account of its isolation and distance from the rails, it has at least gone far to prove the possibility of cultivating high-class fowls in the coldest and most barren parts of the country.

As hinted above, the entries in poultry were small, and some pens were empty, Mr. Wilkinson's birds not arriving at Alston, five miles away, till after the awards were made, but the station-master kindly fed the birds with soaked tea cakes and returned them. *Game* were fair in quality in both classes, but the Gold-spangled *Hamburghs* very poor; while the Gold-pencils, which were locally bred, except as regards the second-prize pen, were a nice lot; the second, however, were too dark in colour. Only the Silver-spangles in first-prize pen were what they should be, but the Silver-pencils, as before hinted, were a good lot. In the Variety class the first were Black Polands, and second Partridge Cochins; and in pairs of hens, first was a handsome pair of Silver-pencilled pulleta, and second White-crested Black Polands. *Ducks* are never good here.

The *Cage Birds* mustered well, and made a rare show. First came the Belgians with only four entries; the first was, however, a real good bird—good in style, carriage, and condition, with a capital back, the second failing only in that respect; both were Buffs. In Yellow and Buff classes, which mean Norwich of course, the pepper scheme seems to have reached even here, and the winners were mostly of that kind, the same remark applying also to the marked birds, where some good four-pointed birds were shown. Green Canaries are generally good here, and this was no exception, and the Duns were a fair lot. In pairs of Canaries, first was a handsome pair of Belgians, and second Marked Norwich. The rest of the classes contained some good specimens.

Game.—*Black-breasted and other Reds.*—1, W. Armstrong, Low Row. 2, W. Walton, Cocklake. 3, T. Brown, Nenthead. *hc*, T. Brown; W. Walton. *c*, J. Stephenson. *Any other variety.*—1 and 3, W. Walton. 2, T. Brown.

Hamburghs.—*Golden-spangled.*—1 and 3, Rev. H. Robinson, Nenthead. 2, P. Swindle, Nentebury. *Golden-pencilled.*—1 and *c*, J. J. Millican, Nenthead. 2, T. Dickinson, Brampton. 3, J. Cousin. *Silver-spangled.*—1, E. White, Alston. 2, J. J. Millican. 3, W. Graham, Nenthead; G. Dodd, Clows, Gillholme. *hc*, W. Graham. *Silver-pencilled.*—1, 2, and 3, J. Stephenson.

Dorkings.—1, J. Armstrong, Ashgill.

Spanish.—1, T. Storey, Alston. 2, J. Goodburn, Nenthead.

Brahma Pootras.—1, W. Nattrass. 2, J. Goodburn. 3 and *hc*, W. Teasdale, Hudgill.

Bantams.—1, R. Irving, Kirkhouse. 2, M. Coatos, Nenthead.

Any other Variety.—1, J. Goodburn. 2, Miss Snowden, Melmerby. 3, J. Dickinson, Nenthead. *hc*, J. J. Millican. *c*, W. Nattrass; E. Thomason, Ashgill; Dr. Horder.

Any Variety.—*Hens.*—1, J. Stephenson. 2, J. Goodburn. 3, J. Walton. *hc*, J. J. Millican. *c*, T. Brown.

Ducks.—1, J. Kindred, Bayles. 2, J. Richardson. *c*, R. Walton.

Pigeons.—1 and 2, W. Graham.

CAGE BIRDS.

Canaries.—*Couple.*—1, T. Brown. 2, M. Stelling. *hc*, P. Swindle, Nentebury; J. Dickinson, Nenthead. *c*, J. Percival, Nenthead; W. Thompson.

Belgian.—1, T. Brown, Nenthead. 2 and *hc*, M. Stelling, Wellington.

Yellow.—1, 2, and *hc*, M. Stelling.

Buff.—1, M. Stelling. *hc*, W. Thompson, Nenthead. *c*, J. Graham; W. Thompson.

Marked.—*Yellow.*—1 and 2, T. Brown. *vhc*, T. Brown; M. Stelling. *hc*, M. Stelling; J. Stephenson. *Buff.*—1 and *hc*, T. Brown. 2, G. Moore. *vhc*, M. Stelling.

Green.—1, J. Richardson. 2, R. Doyle, Nenthead. *hc*, H. Doyle; M. Stelling.

Dun.—1, T. Brown. 2 and *vhc*, M. Stelling.

Goldfinch.—1, M. Stelling. 2, T. Brown. 3, W. Rutherford, Dykeheads.

Mule.—1 and 2, M. Stelling.

Any other Variety.—1, J. Stephenson. 2, T. Liddle, Nenthead. 3, T. Brown.

The Judge was Mr. E. Hutton, Pudsey.

CARNOUSTIE ORNITHOLOGICAL SOCIETY'S SHOW.

This Exhibition of poultry and Pigeons was held on the 23rd inst., and was the most successful Show ever held by the Carnoustie Society. The quality in most cases was very good, and in some exceedingly so.

Game were a large and good class, first a good pen of Brown Red; second a fair cock, but wretched hen; third a pen of grand Black Reds; 7 contained a good hen. *Dorkings* were very fine, the first a really grand pen, the cock a Palace winner. There was not a bad bird in the class. *Cochins* were good, first going to a pen containing a grand hen mated with a fair cock; second good Buffs; third White; fourth Buff, a large cock. *Brahmas* were numerous and the quality excellent, first a grand cock, with a large and well-shaped but not too well-coloured hen. They were undoubtedly the best pen, and won in addition the cup given to the best pen shown by a member. Golden-spangled *Hamburghs* were few, but Silver-spangled mustered pretty well. We did not here agree with the Judge; the best pen was not noticed, being that belonging to Mr. McAndrew. The first were next; while second contained a bad hen, with a cock whose comb had been lately trimmed, the scars being most noticeable. Pencilled were a fine class. *Spanish* were also good, the first-prize pen stood out easy winners; second and third also good. *Houdans* were, wonderful to say, well represented, and the quality good, though some of the pens would have been farther forward had they been better matched. The Variety class was headed by a splendid pair of Black Hamburghs, second good Crêves, third Golden Polish. There were also good Scotch Greys, Silver Polish, and Silkies in the class. The extra prizes for the best cock in the Show was taken by the first-prize Game cock, belonging to Mr. R. Stewart; while that for the best hen went to Mr. Paton's Cochin hen. Game *Bantams* were both plentiful and of nice quality, first a pair of good Black Reds; second, the same colour, we did not like so well as the very highly commended pen, which should have stood second; third and fourth went to Piles and Duckwings. In the Any other variety class first were nice Sebrights; second Black; third White. *Ducks* were not very numerous, though the prize birds were of good size; first Rouens; second and third Aylesbury.

The *Pigeons* numbered about forty entries. Pouters were poor; but Fantails were good, as were also Tumblers; first a pair of nice Reds, second Almonds, third small Agates. In the Variety class first were a pair of fine Black Carriers, second good Yellow Magpies, third Blue Turbits.

Game.—1 and Cup, R. Stewart, Blair Adam. 2, R. J. Nicoll, Carnoustie. 3, J. Morrison, Forfar. 4, Miss R. Frew, Sinclairtown, Kirkcaldy.

DORKINGS.—1, D. Gellatly, Meigle. 2, J. Symon, Errol. 3, Mrs. W. Chalmers, Hallyburton, Coupar-Angus. 4, J. Sharp, Errol.

COCHIN-CHINA.—1 and Cup, W. M. J Paton, Broughty Ferry. 2, W. Nicoll, East Newport. 3, Mrs. G. Armitstead, Isobmartine. 4, Mrs. A. G. Duncan, Broughty Ferry.

BRAHMA POOTRA.—1 and Cup, J. Smart, Carnoustie. 2, F. C. Parker, Dundee. 3, H. Greenhill, Carnoustie. 4, W. G. Duncan, Dundee.

HAMBURGHS.—*Gold-spangled.*—1 and 3, G Low, Carnoustie. 2, J. Milne, Maryton, Montrose. 4, T. Hepburn, Carnoustie. *Silver-spangled.*—1, C. J. Wilson, Carnoustie. 2, Mrs. C. B. Taylor, Montrose. 3, G. Low. 4, W. Gibson, jun., Carnoustie *Gold and Silver-pencilled.*—1 and 2, G. Caithness, Carnoustie. 3, W. Milne, Forfar. 4, J. Taylor, Montrose.

SPANISH.—1, J. Norval, Alloa. 2, Mrs. W. Steven, Montrose. 3, D. Kidd, Carnoustie. 4, P. Symon, Errol.

HOUDANS.—1, A. Robertson, Carnoustie. 2 and 4, J. Smart. 3, Mrs. Stuart, Arbroath.

ANY OTHER VARIETY.—I and 4, G. Caithness (Black Hamburghs and Scotch Greys). 2, J. Smart. 3, J. Taylor, Montrose (Golden Polands).

BANTAMS.—*Game.*—I, J. D. Donald, Montrose. 2, P. Symon. 3, Miss J. M. Frew, Kirkcaldy 4, Mrs. Frew, Kirkcaldy. *Any other variety*—1, R. Frew, Kirkcaldy. 2, Miss B. P. Frew, Kirkcaldy. 4, J. Taylor, Montrose.

SELLING CLASS.—*Cock or Two Hens.*—1, P. Symon. 2, A. Bowie, Carnoustie. 3, F. Bell, Carnoustie (Buff Cochin).

DUCKS.—1, J. Fowler, Scotscraig, Tayport. 2 and 3, A. Bowie.

PIGEONS.

POUTERS.—*Pair.*—1, J. Cowe, Aberdeen. 2, J. F. Macdonald, Dundee. 3, Miss J. M. Frew

FANTAILS.—*Pair.*—1, A. Smith, Broughty Ferry. 2, Mrs. A. G. Duncan, Broughty Ferry. 3, W. Guild, Bayfield, Broughty Ferry.

TUMBLERS.—*Pair.*—1 and 3, J. Smart, Montrose. 2, D. Kennedy, Forfar.

ANY OTHER VARIETY.—*Pair.*—1, A. Smith (Carriers). 2, Miss R. C. Frew. 3, R. J. Wilson, Durn, Perth (Turbits).

JUDGES.—*Poultry:* Mr. T. Raines, Stirling. *Pigeons:* Mr. J. E. Spence, Broughty Ferry.

PENRITH (WESTMORELAND) ORNITHOLOGICAL SOCIETY.

(*From our own Correspondent.*)

THE Penrith Ornithological Society is now one of the institutions of the town, the Committee having on the 15th and 16th inst. at the first Exhibition received such a measure of support as will, we think, encourage them to make the Show annual. The following are the awards:—

MEMBERS' CLASSES.

BELGIAN.—*Clear Yellow.*—1, J. Turner, Penrith. 2, J. Deanwood, Penrith. *Clear Buff Belgian.*—1, J. Carruthers, Penrith. 2, E. Shaul, Penrith. *Marked Yellow or Buff Belgian* —1 and 2, J. Carruthers. *Clear Yellow Canary.*—1 and 2, J. Ostel, Penrith. *Clear Buff Canary.*—1 and 2, J. Sisson, Penrith *Marked Yellow or Buff Canary* —1, J. Sisson. 2, F. Moor, Penrith. *Even-marked.*—1, J. Turner. 2 and 3, J. Pickering, Penrith. *Glasgow* —1, G. Allinson, Penrith. 2 and 3, J. Carruthers. *Norwich.*—1, J. Turner. *Any other variety of Canary.* —1, J. Turner. 2, E. Shaul.

OPEN CLASSES.

BELGIAN.—*Clear or Ticked Yellow.*—1, J. Rutter, Sunderland. 2, Reid and Wilkinson, Halifax. *Clear or Ticked Buff Belgian.*—1, J. Rutter. 2, Reid and Wilkinson. *Clear Jonque Norwich.*—1, Atherauch & Son, Coventry. *Clear Buff Norwich.*—1 and 2, Athersuch & Son *Even-marked Yellow or Buff Norwich.* —1, Athersuch & Son. 2, J. Adams. *Ticked or Uneven-marked Yellow or Buff Norwich* —1, Athersuch & Son. 2, J. Adams. *Golden-spangled Lizard* —1, Clemінson & Ellerton. 2, S. Banting, Derby. *silver spangled Lizard* —1, Reid and Wilkinson. 2, T. W. W Fairbrass. *Clear Yellow Yorkshire.* 1, Reid and Wilkinson. 2, Fawcett & Anderton, Baildon. *Clear Buff Yorkshire.*—1, Reid and Wilkinson. 2, J. Deanwood. *Even-marked Yellow or Buff Yorkshire.*—1 and 2, Reid & Wilkinson. *Ticked or Uneven-marked Yellow or Buff Yorkshire.* —1, Fawcett & Anderton 2, Reid & Wilkinson. *Clear Yellow Glasgow.*—1, J. Turner. 2, R. Bryden, Lochmaben. *Clear Buff Glasgow.*—1, R. Bryden. 2, W. Clark, Langholm. *Flecked Glasgow.*—1, A. A. Manchan, Dumbarton. 2, R. Bryden. *Any variety of Crested Canary.*—1, J Baxter, Newcastle-on-Tyne. 2, R. Hawman, Middlesborough. *Any other variety of Canary.*—1, J. Adams. 2, Clemінson & Ellerton. *Selling Class.*—1, A. Palmer. 2, G. Cox. *Goldfinch and Canary Mule, Clear or Variegated.*—1, G. Stephenson, Gateshead. 2, J. Baxter. *Goldfinch and Canary Mule, Dark.*—1, R. Hawman. 2, G. & J. Mackley, Norwich. *Any other variety of Mule.*—1, J. Speece, South Shields. 2, R. Hawman. *Goldfinch.*—1, J. C. Bamber, Preston. 2, Clemінson & Ellerton. *Brown Linnet.*—1, Clemінson & Ellerton. 2, Baxter & Percival. *Any other variety of British Bird.*—1 and 2, R. Pearson, Whitby. *Any variety of Foreign Bird.*—1, S. Bunting 2, T Barrrow, Monkwearmouth.

PENRITH CLASS.—*Singing Bird, showing no Belgian Properties.*—I, Miss M. Watson, Penrith. 2, J. Ostle, Penrith.

SPECIAL PRIZES.

Silver Cup for the best bird in the Members' classes.—J. Turner, Penrith. Silver Cup to the winner of the most points in Classes 11 and 12.—J. Rutter, Sunderland Silver Cup to the winner of the most points in Classes 13, 14, 15, and 16, Athersach & Son, Coventry. Silver Cup to the winner of the most points in Classes 17 and 18.—Clemінson & Ellerton, Darlington. Timepiece to the winner of the most points in Classes 19, 20, 21, and 22.—Reid & Wilkinson, Halifax. Silver Cup to the winner of the most points in Classes 23, 24, and 25.—R. Bryden, Lochmaben, Dumfriesshire. Silver Cup to the winner of the most points in Classes 30, 31 and 32.—R. Hawman, Middlesborough. Silver Cup for the best bird in the Open Classes, J. Spence, South Shields.

JUDGES.—*For English Birds:* Mr. P. Rawnsley, Bradford; and Mr. W. Watson, Darlington. *For Scotch Birds:* Mr. James Thorpe, Dumfries.

ALLOA POULTRY SHOW.

THE above Show was held in the Corn Exchange, Alloa, on January 15th and 16th. There was a fair display of poultry, and Pigeons were a fine lot. *Dorkings* were very numerous, especially Silvers, and the prizewinners deservedly placed. *Spanish* were good; first a very nice pen, which we think we have seen win several times this season. *Hamburghs* were numerous and the quality good, especially the Golden-pencils. Golden-spangled were entirely absent, but Silver-spangled made up for the deficiency. *Brahmas* were a good though small lot, the first-prize birds in this class winning the cup for the best pen in the Show. *Cochins* were not numerous, nor were *Game*, which, however, were of fine quality. Game *Bantams* were a large lot. First were Black Red, a grand hen, but the cock too squirrelled in the tail; second fair Piles. Any other variety Bantams.—First Black, which should, however, have been not higher than third. Second good Silver Sabrights; second better Blacks than first. Any other variety.—First, good Black Hamburghs; second, Houdans; third, Crêves.

Pigeons were headed by White Pouters, which were a good lot and well judged. Red or Yellow came next. First a grand pen of Reds: the hen in this pen won the cup for the best Pigeon in the Show. Second was a mistake; 188, Yellow, unnoticed, was far before them in all respects. Blues were a fine class well judged, as was the Any-other-colour class; first here Mealy, a really magnificent hen and good cock. Tumblers were numerous: the best pen of the lot was the first Kites in the Any-other-colour class. Fans were, we think, a mistake; first going to great coarse birds of English type, all tail, no motion. Any other variety.—First, Red Barbs; second, Carriers, a fine pair; third, Dun Barbs.

JUDGES.—*Poultry:* Mr. Jardine, Kilmarnock; *Pigeons:* Mr. A. Frame, Larkhall.

DRAGOONS VERSUS HORSEMEN.

I HAVE read with much pleasure the communications of Mr. Staunton and Mr. Henry upon this subject, and I may add that I have had private letters from some who, though they decline coming forward in print, yet as heartily agree with my view as the two above-named gentlemen. Now, I think that Pigeon fanciers—I mean true fanciers—and much as I delight in shows, yet the prizes do slightly interfere with genuine Pigeon love, for a number of men exhibit for prizes who but for prizes would not keep Pigeons. I say that true Pigeon-fanciers have a great regard for the opinions, especially the recorded opinions, of fanciers of a former day; that they do not regard the fancy as merely a thing of the present, but as an old taste and regulated by old rules; that a hundred years ago a Pouter was a Pouter as now, a Carrier a Carrier, and that a Dragoon ought to be a Dragoon; and I add that true fanciers are jealous of any changes of name or nature, and only welcome changes which all fanciers agree to as being improvements. Returning to the subject of genuine fanciers and shows, I quote with much pleasure the words of a grand old fancier of Pouters, Mr. Ure of Dundee. Speaking of the days of his youth he says, "In those days I should think no one but a genuine fancier kept Pigeons. They had no open shows, as we have now almost every week, so there was nothing to induce the spurious or mere 'showing' fancier to go into them. They had their private clubs, where they met to exhibit their old 'cracks' or the young coming 'wonders' that were to knock the old ones off their perches; and I am not sure but these were the right sort of shows after all." It is, then, genuine fanciers, who free from prize-bias (not but that many who take prizes are very genuine fanciers), to take care that the laws of the fancy be not improperly altered, and that a bird of one variety be not foisted on to the world as a bird of another—*e.g.*, that a bad Carrier or a good Horseman be not panned with Dragoons and pass by their name.

In this matter let us go back to our forefathers and hear what they have to say, and what sort of a bird they call a Dragoon Pigeon. Old Moore, A.D. 1735, gives a longish account of the Horseman, a bird then thought much of, and even painted in oils by Bogdani, an eminent painter of the reign of Queen Anne, and several of whose works that Queen had in her palaces, where they hang to this day. These birds are described minutely as to head, &c., and colour; and these very birds I hold are now highly esteemed, but called "Dragoons, London Style." In the Treatise, A.D. 1765, we have a little more about the Dragoon; but we have nothing added by Girton; and until the modern writers, Brent, and Easton, and others, nothing save one remarkable exception. In the work published by Longman, first edition, I fancy about 1830, we have a good engraving of a Dragoon's head, just like the one pictured by Mr. Ludlow; and accompanying the engraving these additional words of description—"One of the principal beauties of the Dragoon is the straightness of the top of its skull and that of its beak, which ought almost to make a horizontal line with each other." Then goes on a remark saying that the cut is from a fine living bird. But in the words I have quoted lies the pith of the whole matter—straightness of skull and of beak; and in the book quoted, "the lightness and smallness" of the Dragoon is spoken of in contradistinction to the heaviness of the Horseman.

Now, such was the Dragoon, and such is the true historical fancy Pigeon rightly called a Dragoon, so named from the small light cavalry soldier called a Dragoon, who is a small man and rides a small horse, while the Horseman Pigeon corresponds to the heavy horse soldier. I have had the opportunity of seeing a group of true Dragoons drawn by Mr. Ludlow, which when published will delight the fanciers of the genuine bird. Much as I like some fanciers, though their knowledge is almost limited to Pigeons, yet those who know something of English literature as well as Pigeons should have a voice in this matter.

I have not seen one argument in favour of Horseman-Dra-

goons. All that is stated is Mr. This-person's opinion or Mr. That's. Argument based on the history of the fancy has not been attempted; and the men who accept the Horseman as a Dragoon know and will own that their birds are often not Dragoon-bred. That the old variety, called properly the Horseman, should be an exhibition bird is my wish. In this fight of truth against prizetaking I see the especial value of Pigeon periodicals; for a judge even is apt to say, "Well, I shall only give a prize to the Pigeon I approve;" but Pigeon-writers are too strong for even prejudiced judges. I wait anxiously for arguments, and not merely for the opinions of this fancier or that keeper of Pigeons. As the matter now stands the writers in favour of the bastard-bred young Carriers, or true Horsemen, are—to adopt an old phrase and putting to it a new signification —"utterly routed, horse, foot, and Dragoons."—Wiltshire Rector.

STANDARD OF DRAGOON.

I am very glad this question is getting somewhat nearer settlement. I observe an article upon this subject in another periodical by Mr. South, who has, I believe, bred some of the winning birds at various exhibitions, and therefore ought to know something about the birds in question, and with the concluding part of his statement I must say I agree, though we have begun at the wrong end; but no doubt we shall in due time, if we go on, arrive safely to the head of the bird. Mr. South says that the tail of the Dragoon ought not to touch the ground. I presume he means when the bird stands quite or perfectly upright. I then with my rule or straightedge referred to the bird and article by "Wiltshire Rector," in this Journal, and on placing the straightedge level with the sole of the feet found that the bird did carry the tail well off the ground. With this I agree as being one of the true points of a Dragoon, and that no Judge ought to give a prize or even a commendation to a bird, however good it may be in other points, if the tail does touch the ground, as a Dragoon ought not to be a long-feathered bird.

As to the pink eye, I have always seen it in a true-bred Dragoon, but if it can be bred-out as an improvement I have nothing to say against it. Mr. South also says, to settle the question let there be chosen (I say by ballot), two members out of each society. I suppose he means a London and a country society. Now, I would propose that there be twelve chosen by ballot to settle this question, say two from London, two from Birmingham, two from Manchester, and the other six from the different parts of the United Kingdom, not forgetting Mr. Ludlow with his pencil, that he may draw a true likeness of the bird chosen by the said twelve, as being the most perfect specimen. Let all the gentlemen send their names to you that are willing to act, then let a printed form be sent to all Dragoon fanciers, and let them place their mark X opposite the name they wish to act. I will give one guinea towards the expenses with pleasure.—W. Woodhouse, *King's Lynn.*

BEE-KEEPING IN 1875.

The new year dawns upon us hopefully in regard to the prospects of bee-keepers. Frosts and snow, of which we have had a fair share already, and at a very seasonable time, are an excellent preparation for a good and plentiful honey harvest. Here in the south-west of England, living as we do very near the seacoast, frosts of any severity are rare. As it is, I doubt if we have had more than 12° of frost, and that for only two or three days' duration; and it is now several years since we had frost enough to skate anywhere about us for more than a few hours at a time. Now, I have often observed that our best honey seasons—and they are of rare occurrence here—have followed our coldest winters. Therefore I augur hopefully for the summer before us. It is now (Jan. 16th) so warm, and has been so for some days, that a fire might have been dispensed with. At this moment I am sitting with my window wide open facing north, and my bees have been busy pollen-gathering. I noticed this pleasant sight for the first time on the 12th, but I have no doubt they were at it some days before during my absence from home. All my hives, eleven in number, seem to be in good health, and well supplied with provisions.

It is a good thing when the weather is open, as at present, to clear away as many dead bees as can be got at within the hive without breaking away the hive from its board. This can frequently be done by inserting a piece of wire with a curve at one end, and hooking out the dead on the floorboard. The effluvium arising from a mass of corrupting bodies is often very great, and after a long period of cold weather there is sure to be a considerable quantity of such dead bodies lying about the floorboard inside. The bees ordinarily remove their dead themselves from day to day when they can get out; but it helps them much to assist them in this labour, besides adding to their health and comfort. Where wooden hives are used no harm can accrue from breaking-up the hive from its board in any case where these fit accurately. It is in the case of straw hives, which rarely do sit ovenly on the board, that it is perilous to remove these boards in winter. Sometimes I have known the dead accumulate so thickly about the entrances inside as to choke them up entirely, in which case, there being no exit for the bees, the hive perishes inevitably. Let all bee-keepers watch against eventualities like these, as well as against long-continued accumulations of snow outside on the entrance-boards.

These hints are not untimely, as we shall doubtless ere long be visited by a sharp increase of cold, all the more severe for the present extraordinary warmth of temperature.

Since writing the above I have been examining my hives, and found ten out of the eleven pollen-gathering, some of them quite vigorously. One hive, active and strong, on inspection by a window at the back seemed to have a large number of dead scattered below the combs. So being a "good divine that follows his own instruction," I quickly heaved-up the hive by means of a screwdriver, and with a thin stick swept off right and left about thirty dead bees, whose fragrance was certainly not of the sweetest. *Sat verbum sapienti; experto crede.*—B. & W.

ONWARDS.

Apiarians as well as farmers and gardeners look forwards to spring with uplifting hopes. Spring flowers, generally speaking, afford more pleasure than autumn ones. All lovers of nature admire and welcome spring. It is budding-time in many senses, and with many persons and things. The enthusiasm of many seems to swell with the buds of the trees. The resolve is, that this year will be one of greater enjoyment and greater success. Apiarians were never so enlightened as they are now, speaking generally, and some of every school of management are hoping for a year of sunshine. We sincerely hope that 1875 may be a year of encouragement and success to all bee-keepers. Their motto is "Forward and onwards," not "Rest and be thankful." As soon as spring commences our "busy bees" will be abroad foraging. The crocuses, willows, and species of tussilago are amongst our earliest flowers, and these yield both pollen and honey.

In the south of England breeding commences early in February, when bees may be seen sipping and carrying-in water. All hives should be examined now, and have their boards well cleaned. If any of them have mouldy combs these should be cut out to save the bees the time and trouble of doing it themselves. Some combs, not mouldy, may have perished (lost their adhesive power), and crumble when touched by human hands. Damp hives from any cause will destroy the nature or adhesive power of combs not covered by bees in winter. Hence it is advisable to carefully examine all stocks at the present time with a view to remove all impurities and hindrances out of the way of the bees. If there be nothing to remove, there may be always something learned by an examination of hives internally. Small contracted doors and warm outer coverings are of great importance in the months of February and March. Then bees need all their natural warmth to assist in hatching brood.

It is yet rather too soon to begin artificial feeding. When this is begun it is well to continue it in unfavourable weather, whether hives really need it or not. A check to the prosperity of a hive during the spring months may be a very serious affair. A continuation of cold weather, together with the prospect of hard times, often puts an end, for the time being, to breeding in a hive. The bees instinctively decline to set eggs in times of threatened starvation. Hence the importance of feeding in unfavourable weather. Feeding at such times keeps-up the hum of health in our hives, and causes the inmates to move upwards and onwards.

The parent hive that (with its swarms) rose in weight to 373 lbs. last year, "got a quarter of a pound of sugar with an equal weight of water daily, from the 20th of April till the field honey came in." This happened in the north of Scotland. In most parts of England, and Scotland too, in ordinary seasons artificial feeding may be commenced earlier than the middle of April. Spring feeding is resorted to simply to stimulate and keep alive our liliputian communities.—A. Pettigrew.

METHEGLIN.

Now that bee-farming is assuming such proportions, and the sale of honey in many districts is so limited, what is to be done with the hundredweights of surplus honey? At present cus omers are exceedingly scarce. Chemists will offer 8*d.* or 9*d* per lb. for pure run honey, which is worth at least 1*s.*

The suggestion of Mr. Hunter is a very good one, that of manufactnring honey into honey bread, bonbons, pastils, chocolates, &c. If our confectioners would take a leason from our French neighbours, there would probably soon be a greater demand for the delicious article.

I do not know of anyone who can give a recipe for any of the eatables mentioned by Mr. Hunter, but I can furnish a

recipe for metheglin if you think it worth the space in the Journal. Perhaps some of your numerous correspondents will be able to give recipes for a few if not all the other good things in Mr. Hunter's catalogue. And here I may state that the metheglin which fell to that gentleman's share at the Crystal Palace Show was prepared from the same recipe.

When the comb has been drained of its honey, put it in a large vessel, then pour in sufficient lukewarm water to swim it nicely. Let it stand two days, stir it occasionally, then strain it. Skim the scum from the liquor carefully, filter the sediment through a flannel bag, then boil one hour. To 3 gallons:—2 lbs. raisins, 1 oz. of ground ginger, and seven or eight laurel leaves, then cool. Add a little of brewer's barm, let it stand part of a day, then barrel it, leaving the barrel open for two or three days, then bung it up, and let it remain untouched for six months, then bottle it. I daresay some who try their hands at making this honey-drink will be anxious to taste before the expiration of the six months, but the longer it is kept the better it will be. If an egg will float on the liquor it will be about the right strength.

Metheglin may of course be made from run honey, but by soaking the combs in water we utilise the honey which would otherwise be lost. A little lump sugar put in each bottle will make it as fine as brandy.

The above recipe was given me by Mr. J. Green, an old bee-keeper, whose aunt has been famous for honey-drinks for many years.—J. Oliver, *Hartington, Derbyshire.*

SALE OF HONEY.

It has been suggested that a sale of honey should take place on the next occasion of the Crystal Palace Bee and Honey Show in a more systematic manner than was the case last autumn. This is a matter which is of great interest to all bee-keepers, as we know by long experience how difficult it is to find a good market for our surplus honey, whereas if such market were found there would, we feel sure, be no lack of buyers at very remunerative prices. Good honey cannot be bought in London for less than 2*s.* or 2*s.* 6*d.* per pound. It is rare in the country to find purchasers at 1*s.*; add 6*d.* per lb. to this, and buyers would largely increase to the great advantage of the whole community, to none more than to the rustic bee-keeper.

There are difficultiea in the way of connecting such sale of honey with the Show, especially in the case of competing supers. To break up these for sale, except at the close of the Exhibition, would be to spoil the Show for every day but the first. We fear this cannot be thought of, and exhibitors who compete for prizes must be content to price their supers for sale *en bloc*, to be carried off or sent off afterwards; of course at the close of the Show there might be opened a retail market for their contents, of which due notice would be given.

But there might be a continuous sale all through the Exhibition of small boxes of tin or earthenware, containing from five to ten or more pounds, equally pure and excellent, from the stores of the bee-master at home, prepared beforehand in convenient baskets ready to carry away. Very cheap baskets could be made expressly for the purpose, with tins exactly fitting. In this way almost any quantity of honey could be sold, also of run honey in jars. I do hope something of the sort may be tried. Any bee-master with a large and productive apiary would surely find it to his interest to prepare his honey for sale in some such way. Let only one enterprising person pioneer the way, and he would in time have a large following, but at first all to himself, a heavy purse. I throw this out for the consideration of Mr. Hunter and the Committee of the Bee-keeper's Association.

As it is now, honey is often a great nuisance, and, beyond the quantity required for home consumption, quite too much of a good thing. A neighbour of mine makes his friends welcome to his surplus hives after he has taken what he wants for his own needs and for medicinal purposes among the poor. I have preferred to increase my stock by swarming of late years, and to sell the surplus of my hives in the spring, when the demand begins to develope itself after the losses of winter. In this way I have sometimes made more money than by keeping the bees for honey, and have been spared a great deal of trouble.—B. & W.

Crystal Palace Exhibition of Canaries and British and Foreign Cage Birds.—The entries close on February 3rd, after which date all post entries will be charged 25 per cent. in addition to the fixed entry. Post entries will close on February 6th. Besides the classes of former exhibitions are the following:—An extra £1 for the winner of most points in certain Norwich birds not of high colour; classes for Evenly-marked Crested Yellow and Buff Norwich, Silver-spangled Lizards with broken caps; silver cup for greatest winner in Goldfinch Mules; and prizes for Chaffinches, and the cage best combining cheapness with excellence.

OUR LETTER BOX.

Egg-layers (*Quizzical*).—Our answers to correspondents depend much on the circumstances under which the queries are made. We cannot advise the same to two fanciers, one possessing a run 20 feet by 9, and the other (happy man!) unlimited acres. We still like Brahmas, and do not find them either large eaters or tiresome sitters. We have been tormented by went of sitters for the last month, and yet we have four hundred Brahmas of all ages. Hamburghs lay many eggs, but small. Spanish lay large eggs; they are tiresome moulters. Crève-Cœurs lay large egge, and a great many. Houdane lay well, and are very hardy; their egge are not as large as the Crève-Cœurs'. These are the best layers. We advise either Crève-Cœurs or Houdane. Our advertising columns will show where they can be had.

Poultry Food (*J. E. M.*).—We do not consider locust meal good poultry feed. Few people have had as much experience as we have in poultry-feeding, and few have kept or do keep larger stocks. We have long ceased to believe that you can buy three-shillings' worth of food for 1*s.* 6*d.*, and we have proved most things, only to confirm us in our experience—the best food is the cheapest, and the plainest is the best. We pin our faith to three meals per day; morning and evening barleymeal or ground oats sleked, some whole corn, maize, or barley at midday, and occasionally some table or household scrape.

Manchester and Bristol Poultry Shows.—The first prizes for Roee-combed White Dorkings at both Showe were won by J. Robinson, Vale House, Garstang.

Crushing Mill (*C. T. S.*).—Write for information to some of the iron manufacturers who advertise in our columns. There is no doubt that crushed grain is more easily digested than whole grain. We never need dare.

Mealy Pouters (*J. E. S.*).—It is quite certain that Messrs. Hnie and Ure advocated the clase at the North British Columbarian Society years before our contemporary was thought of, and they may continue their advocacy long after our contemporary is forgotten.

Crystal Palace Canary Show (*M. G.*).—It is fixed for February 13th, and from 15th to 18th.

Combs Black (*Jane*).—The black combs in your hives have been too long in use, and have become black from age. You ask how they can be cut out without destroying the bees. To cut them out now would put the bees to a great disadvantage, and probably destroy them, for the blackest of the combs are in the centres of the hives, where the bees are sitting and where eggs will soon be set. It would be bad policy to cut out the combs just now. If there are parts of them rotten, cut them off with a table knife, but let all the rest, however black, remain till about three weeks after you obtain first swarms from them; then drive all the bees from your old hives into empty ones, and take their honey. In this way you will renew your stock and increase it without sacrifice; and seldom let your stocks be older than two years, and never more than three.

Fire Extinguishing (*J. L. T.*).—Not having any experience we cannot advise. Write to all the advertisers of extincteurs, &c. They will send you testimonials, &c.

METEOROLOGICAL OBSERVATIONS,
Camden Square, London.
Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. Jan.	9 A.M. Barometer at 32° and Sea Level.	Hygrometer. Dry.	Hygrometer. Wet.	Direction of Wind.	Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	Shade Temperature. Min.	Radiation Temperature. In sun.	Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 20	29 721	48.7	45.2	W.	44 7	53.5	46.1	59.1	43 6	0.061
Th. 21	29.469	40.7	39.3	W.	43.9	45.7	38 9	56 9	36.9	0.491
Fri. 22	29 877	32.5	31.7	N.W.	42.0	41.8	30.2	76 5	27 9	0.161
Sat. 23	29.629	41.2	41.1	S.W.	39.6	52 5	31.8	56.8	31.0	0.133
Sun. 24	29.171	45.5	43 8	W.	41.7	50.5	41.5	71.2	39 7	0.220
Mo. 25	29.249	41.6	40.3	W.	42.0	46.4	39.0	83 2	36.1	0.178
Tu. 26	30.149	38 3	37.7	N.E.	41.0	43.0	34.3	56.2	31.0	—
Means	29.609	41.2	40.2		42.1	47.6	37.3	65.7	35.0	1.173

REMARKS.

20th.—Windy all the past night, rather less so after 3 A.M.; fine day, but rain in the evening. A slight aurora.

21st.—Fine morning, and till noon, then dull; wet evening and fine night.

22nd.—Bright frosty morning, rather less bright in the after part of the day.

23rd.—Wet from 4 A.M.; fine for a short time about noon, dull afterwards.

24th.—Wind very high all night, but going down about 9 A.M., though slightly windy all day; occasionally very bright, but a sharp shower about 4 P.M.; fine evening. [at times.

25th.—Stormy night and morning; bright but windy forenoon; heavy showers

26th.—Dull early, but soon cleared off, and was very fine in the middle of the day; but rather dull afternoon and evening.

Mean temperature in shade about 7° below last week. Occasional hot sun, frequent rain, and heavy gales.—G. J. Symons.

COVENT GARDEN MARKET.—January 27.

We have experienced rather more demand with the improvement in the weather; but the supply has kept pace with it, so that little or no change has taken place in prices. Heavy arrivals of St. Michael Pines are in the river, reported in fine condition. The Oranges also are better. Among rough produce we notice very large arrivals of Broccoli from Penzance. Some good early frame Potatoes are also to hand from Jersey, making 1*s.* to 2*s.* per pound.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples..... ½ sieve	1 0	to 1 6	Mulberries..... ℔ lb.	0 0	to 0 0
Apricots..... doz.	0 0	0 0	Nectarines..... doz.	0 0	0 0
Cherries..... ℔ lb.	0 0	0 0	Oranges..... ℔ 100	8 0	12 0
Chestnuts..... bushel	1 0	2 0	Peaches..... doz.	0 0	0 0
Currants..... ½ sieve	0 0	0 0	Pears, kitchen..... doz.	2 0	8 0
Black..... do.	0 0	0 0	dessert..... doz.	2 0	4 0
Figs..... doz.	0 0	0 0	Pine Apples..... lb.	2 0	4 0
Filberts..... lb.	1 0	1 6	Plums..... ½ sieve	0 0	0 0
Cobs..... lb.	1 6	2 0	Quinces..... doz.	0 0	0 0
Gooseberries..... quart	0 0	0 0	Raspberries..... lb.	0 0	0 0
Grapes, hothouse.... lb.	4 0	8 0	Strawberries..... ℔ lb.	0 0	0 0
Lemons..... ℔ 100	8 0	12 0	Walnuts..... bushel	8 0	12 0
Melons ..... each	1 0	3 0	ditto..... ℔ 100	1 0	1 9

WEEKLY CALENDAR.

Day of Month	Day of Week.	FEBRUARY 4—10, 1875.	Average Temperature near London.			Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. h.	
4	Th	Augustus Pyr. Decandolle born, 1778.	45.0	32.8	38.9	36 af 7	52 af 4	16 af 7	12 af 2	28	14 12	35
5	F	Zoological Society, 8.30 P.M.	45.7	33.5	39.6	34 7	54 4	49 7	33 3	29	14 17	36
6	S	Dr. Priestley died, 1804, aged 61.	46.5	32.6	39.6	33 7	56 4	12 8	50 4	O	14 21	37
7	Sun	Quinquagesima.	46.9	33.0	39.9	31 7	58 4	29 8	26 6	1	14 24	38
8	M	Geographical Society, 8.30 P.M.	45.6	32.0	38.8	29 7	0 5	44 8	51 7	2	14 26	39
9	Tu	Royal Horticultural Annual, 3 P.M.	45.3	31.6	38.4	27 7	2 5	56 8	15 9	3	14 28	40
10	W	Geological Society, 8 P.M.	44.9	30.1	37.5	26 7	3 5	8 9	41 10	4	14 29	41

From observations taken near London during forty-three years, the average day temperature of the week is 45.7°; and its night temperature 32.2°.

CATCHING SUNBEAMS.

WHO can tell the value of an hour's sunshine in January to the gardener who has to keep up a perpetual supply of choice fruit, flowers, and vegetables? the demands for which always seem to increase in proportion as the weather gets worse. Fourteen hand-barrowloads of plants in flower (fine-foliage and Ferns count for nothing here), all through the dullest months of winter to be kept principally in dark dry passages heated with hot-air flues, which produce anything but a genial atmosphere, according to my notions of geniality, varied now and then by an icy draught from wide-open windows early in the morning when the weather is bright (and bracing to the hardier members of the animal world), take no small amount of scheming and forethought.

But all this is play compared with supplying choice vegetables to M. le Chef, who expects his demands for *Concombre*, *Tomate*, &c., to be supplied as easily as his order to Messrs. Barto Valle for maccaroni. Let a thing be known to be scarce, it is supposed to be *recherché*, and the demand increases accordingly. I have sometimes found the following little bit of stratagem successful, but I am afraid it will not serve me much longer. When a thing is likely to run short, gather all that can be laid hold of, of good, bad, and indifferent quality, and cause all to be placed before *le Chef* at once, who will then say it is not *recherché*, it is too common, and you may, perhaps, get a respite for a week. This, of course, is not honest practice, and an hour's sunshine made the most of will often do much to remove all difficulties.

We have now had several weeks of very dull, almost dark days, with not ten minutes' sunshine in a week, and, strangely enough, frequently as soon as the sun had fairly gone down the sky cleared, and the moon shone brightly. I suspect it would take a lot of moonshine to produce a pennyworth of chlorophyll. Now to-day, this 22nd of January, after a little frost, we have actually had a whole day's sunshine—glorious sunshine! a blessing not to be lightly esteemed. I was a little timid in the morning, anxious to make the most of every ray of light, but half afraid that tender Vine leaves, which had never seen real daylight before, would not bear such an abundance of it. Peaches, too, with flowers fully expanded under very adverse circumstances, would they bear it? Cucumbers with strong vigorous shoots, but with scarcely so dark a green colour as they should have, and some of the little fruits damping at the end, barely keeping pace with the daily demand for salad, and affording none for culinary purposes, if they could be induced to stand three or four hours of this heavenly sunshine would never look back again. Strawberries with their crowns just opening, Roses with shoots an inch long and just coming into leaf, Asparagus is *Asperge blanche* when we would rather have it *Asperge verte*. Everything, excepting, perhaps, French Beans, shows a want of daylight. Now it is come, will they be able to bear it? Fortunately at sunrise there is no house with a higher temperature than 57°. Peaches, Strawberries, and Roses have a lower temperature than this. Drops of moisture hang like beads round the edges of the leaves, and when the sun shines through the roof it feels inside the houses as nearly like a fine morning in May as anything I can imagine. There is no time to stop long in a place; there is much running backward and forward, just putting the least bit of air on one house and then running on to the next. There is not even time to look at the thermometers, temperature now is immaterial. The all-absorbing question is, Will the foliage, which is comparately thin in texture and short of chlorophyll, bear the sunlight?

Very little air must be admitted at once. It is still a frosty air. A leaf must not be seen to move, nor a breath of cold air felt. All the air must be admitted at the top, not the least bit anywhere else, or a draught will be the consequence. The sun still shines and the sky looks clear, another run round, another chink of air on the Peach house. The trellis is touched, and the pollen is seen floating about in the sunlight. The petals look strong and healthy, and some fall off still perfect. Some few buds here fell off when commencing to swell, but I think all are safe now, and the first opportunity will see seven-eighths of them picked off. Other houses, however, want looking to now, and this time it is a question whether the amount of ventilation now on will be sufficient for that part of the day when the sun, supposing it to keep out, will be the most powerful. It is now about 9.30, and there is not a cloud visible. The temperature has not yet risen more than 5° in any of the houses, but it is gradually rising in all; not a leaf is drooping, and there is now every prospect of the plants being able to stand the glorious sunlight. Fires, of course, were stopped long ago, and the pipes are already cooling; it will soon be nothing but Nature's own genial atmosphere. A day like this does more for the gardener than weeks of hard firing. No more air is given after 9.30. The temperature in most of the houses rises to about 75° by 10.30, and as the plants seem to be enjoying it, it is time at twelve o'clock to consider how to make the most of the remaining sun heat. The Cucumber house is now entirely closed, and the temperature rapidly rises to 82°, all natural heat. The pipes, with the exception of those for supplying bottom heat, are now nearly cold. Not a leaf is drooping here; the growth by this time after three hours' bright sunshine must be considerably consolidated, and I shall expect by to-morrow morning to have a visible difference in both leaves and fruits. Other houses now have the ventilation reduced, and all, excepting the Peach house are entirely closed soon after one o'clock. Were the Peaches a little forwarder, and fairly commenced swelling, they would be closed up too; but probably all the flowers are not yet fertilised, and during the process of fertilisation a close atmosphere is not good for them.

Peaches and Apricots outside are fast swelling their buds: I would rather the sunlight did not reach them just yet. I have had limewash in which a little sulphur

was dissolved syringed over them—in fact, over the entire walls, for the purpose of killing insects, and I expect this, as it dries perfectly white, to keep the flowers back a little. This limewash is also applied to Gooseberries, Currants, Plums, &c., to keep the birds from destroying their buds. If made properly with freshly-burned lime, no amount of rain will wash it off. There is still some remaining on standard Plum trees which was applied last winter; and as I find it rids the trees of moss and lichen, and, with the addition of dissolved sulphur, of all insect pests, I mean to use it much more extensively than hitherto. It is very glaring and unsightly, but I must have fruit. Those who object to having it white may add soot or some other innocent colouring matter, and it will still be effectual for all the purposes named, excepting for retarding the blossoms.—William Taylor.

NOTES FROM MY GARDEN IN 1874.—No. 2.

Did I not know how very great is the difference that soil makes in the success or failure of many things I should have wondered very much more than I do at the statements which are made on the subject of Potatoes. When I hear so good an authority as my friend Mr. Kinghorn saying that he has found Climax an excellent one, or I see others writing that they can make nothing of Suttons' Red-skin Flourball, I can only say it puzzles me, and pass on. I have mentioned, as far as my own culture is concerned, that I have some early sorts in my garden, and the remainder in a field where the soil is of a very light sandy nature. In the former I planted small quantities of the following sorts—Brownell's Beauty, Extra Early Vermont, Snowflake, Lee's Kidney, Myatt's Prolific, and Rector of Woodstock. Of these the first was about as ugly and bad a Potato as I ever care to see; it was at once condemned, and will never again find a place in my garden. Extra Early Vermont seemed to me in no way distinguishable from Early Rose, of which it seems to be a selected strain. Snowflake I regard as the very best we have had from America—the only one, in fact, that I should care to grow; it is very white, of good flavour, and apparently prolific. Lee's Kidney I received from my neighbour Mr. Woodford, and found it to bear out all that had been said of it; it is akin to Myatt's Prolific, but earlier, and an excellent cropper. I have saved a good quantity of seed, and think I shall quite discard Myatt's Prolific for it. I find by the Messrs. Suttons' catalogue that the entire crop has been purchased by them from Messrs. Lee. Rector of Woodstock is a handsome round second early Potato of Mr. Fenn's raising; it is very floury, and I shall grow it again this year. My only doubt about it is whether it does not lack flavour, for while a Potato ought not to have any earthy taste, it ought certainly to have some more flavour than a lump of flour in the mouth.

The varieties that I grew in my field piece were Lapstone, Yorkshire Hero, Victoria, Suttons' Red-skin Flourball, Hundredfold Fluke, Waterloo, and Suttons' Exhibition Kidney. I this year altered my plan of proceeding. My first Potatoes were planted on February 2nd, and the whole were finished by February 21st, and all were dug out by August 10th; and the result is so favourable that I mean in future to adopt the same course. The season was, as we know (while trying so far as the largeness of the crop was concerned) an excellent one as far as freedom from disease went, and I do not think that I have had, either at the taking-up or since, a gallon of diseased Potatoes; but then I found that my neighbours who left their Potatoes in the ground until September have complained, not merely that many of them were diseased at the lifting, but that they have lost a good many since. One thing I was doubtful of: Some of the later sorts, such as Victoria, were green in the haulm when they were lifted, and many of them rubbed in the skin. I do not find, however, that this affects their keeping qualities, and therefore the advice Mr. Luckhurst gave me not to mind the skin not being set was sound. Possibly it might have been better to have left them another fortnight, but in harvest time it is difficult with us to get hands, and so I must either have dug them or left them until after harvest; and I am quite satisfied with the result obtained by digging early. I cannot understand why my very good friend Mr. Laxton should have planted as late as he did, and do not wonder that the results in so many cases were disappointing; and while I do not see the advantage of planting so very early as Mr. Radclyffe does, I am persuaded that early planting and early lifting are the two surest preventives of the disease.

With regard to varieties I still cling to my often-expressed opinion, that the Lapstone is the best Potato grown for eating. It is not so heavy a cropper as some, but its flavour is excellent. Yorkshire Hero is very similar to it, but somewhat later, and of the same good character for eating. I believe that for the cottager, who looks for productiveness, there is nothing to exceed Suttons' Red-skin Flourball. It is a late Potato, but I lifted it at the same time as the others. It is one of those large-growing Potatoes that are unsuitable generally for garden culture; and as I have more than once said, the proper way to use it is baking. What are we to say to our Potato culture? I have just read that in America a codified statement of trials has been given, and that 1 lb. of Brownell's Beauty produced 1018 lbs. Surely we must be all wrong in our method of culture when 60 or 70 lbs. from 1 lb. of seed is considered a large crop.

My experience in Cucumber-growing is but small, nor can I say much as to sorts. I had Pearson's Long Gun last year, and found it good; but I believe the two best out are Douglas's Tender and True and Suttons' Duke of Connaught, the former black spine and the latter white spine. The first I believe better fitted for a house, the latter excellent for a frame, where I am going to try it this year.

In the same way I can only say with regard to Melons, that I am quite satisfied that for the small amateur, who like myself can only use a pit that has been devoted to other objects, there is nothing to be compared to Munro's Little Heath Melon. It gives so readily a nice little crop of fair flavour, that I do not think it is possible to substitute any other equally good for it.

Another excellent little novelty is The Queen Onion. It comes in so quickly, makes such pretty little bulbs, and stands the winter so well, that it deserves a place in every amateur's garden—not to take the place of such sorts as Nuneham Park, Improved Reading, and James's Long-keeping, but for early use, and for sowing in the autumn for early spring use.

I have not entered on the subject of Broccolis, &c., for in truth I know not what to say. I have been disappointed in finding, that although I planted so as to get as I hoped a good succession, I have found them all coming in of a heap. It may have been my fault, but it is none the less so.

Such are my experiences of vegetables in 1874. I must repeat that I do not intend to disparage other varieties by speaking favourably of these, but I can only say that in my own cultivation I have found them as I have stated.—D., *Deal.*

WHITE-EDGED GERANIUM LITTLE TROT.

Among the large number of new bedding Geraniums that are annually introduced, varieties of sterling merit occasionally present themselves, and which quickly obtain a place in every garden, not from any puffing or startling announcement upon the part of the raisers, but from that genuine excellence and intrinsic merit which, however much neglected in other things, certainly makes its way among plants. Foremost among such was the famous Tom Thumb, still quoted as an example in habit of growth of what a bedding Geranium should be. Stella, again, was another "standard kind;" so was, and still is, Waltham Seedling; so was Mrs. Pollock, and such is Little Trot.

The white or silver-edged section of Geraniums has never been a very extensive one, nor has it comprised many really meritorious kinds. Alma, Bijou, Flower of the Day, and Perfection were once grown by tens of thousands, but it was solely for the beauty of their foliage; in every other point they were found wanting. Flower of Spring in its bushy habit was a considerable advance upon all those kinds, as were May Queen and Miss Kingsbury; but none of these or others of later date can at all approach Little Trot in any way. Its growth is spreading, dense, compact, and very dwarf—all points of merit in a bedding plant, and in all of which plants of this section have hitherto been lamentably deficient; but it is in the striking and chaste effect of its broad white leaf-margin that it shines so conspicuous and is so superior to other kinds. It particularly attracted my attention in the trial beds at Chiswick last autumn. One was drawn to it involuntarily, precisely as to the glorious masses of Viola Perfection which were there, and conviction came to one's mind with the sight of each that the raisers had not only succeeded in making a "hit," but had conferred a real boon upon all who love flowers.

I was about to add that I had no particular interest in my

advocacy of this plant, but surely that would have been false. The raiser and distributor of a good plant are interested in a pecuniary sense; but there are other kinds of interest, and mine is most undoubtedly to tell to the readers of the Journal whatever facts may be worth knowing about this or other things worthy of their attention.—Edward Luckhurst.

ERANTHIS HYEMALIS, or WINTER ACONITE.

As early spring flowers seem now-a-days to be sought after as earnestly as new or choice bedding plants were a few years ago, it is singular that this old favourite should have received so little attention, having been seldom mentioned as occupying a position in those gardens where "spring bedding," as gardeners will term it, is most patronised; certainly its neglect cannot arise from its want of hardihood, for I do not know of one more capable of preserving itself. In regard to its earliness I am inclined to place it as the very first, if we make the 1st of January our starting point. True, some of the Primroses may be in flower before that time, and so, also, may some of the Hellebores, but they seem rather to belong to the class of autumn or winter-flowering plants than to early spring, of which this beautiful little plant is the type; for I do not recollect at any time ever seeing it bloom before the beginning of the new year, and but seldom is there any token of the plant being present until after that time; still its bright yellow flowers are presented to our view in most cases ere January is out, and very often before it is far advanced; and taking the present winter as an example, it is almost needless to point to December, 1874, as being a very cold and wintry month—frost with us on twenty-seven days, and the ground covered rather deeply with snow for the last sixteen days and for three days at least in January, 1875, while some of the snow remained three or four days more, and when it disappeared there did not seem a trace of this early harbinger of the new year, but its flowers nevertheless presented themselves fully expanded on the 14th in considerable numbers, and I believe a few did so a day or two before that; the Buttercup-like brightness of their petals contrasting favourably with the dark-coloured ground through which they had thrust their way; while their shining-green leaves added by their freshness an additional charm to their welcome appearance. It must be remembered, too, that the plants alluded to did not occupy any favoured spot likely to hasten them on, they being quite in the open ground—being, in fact, an edging to some Rose beds, and not humoured in any way, yet there they are flowering, and their bright numerous flowers visible at a great distance, the dark-coloured soil as well as the turf by which they are bounded alike adding to the contrast, and giving a cheerful aspect to the beds they margin. It happened that the white Primrose I have so often depended on for furnishing a nice display at Christmas, has this season disappointed me; the long period of severe weather before that time prevented them coming on, and the Snowdrops are not yet out, so the palm of earliness this season must in the fullest sense be accorded to the useful little bulbs.

This little plant, which when fully expanded is seldom more than 3 inches high, seems to have been known in this country for nearly three centuries, is more often met with in old neglected gardens than in fashionable new ones. In the former position it will often be found growing at the base of some large timber trees or amongst shrubs that have not been disturbed for many years, and very often struggling for an existence amongst things of much more robust growth, and maintaining the struggle. Many years ago I had a large patch that had originally occupied the spaces between old Fuchsia plants in a bed on which the encroaching branches of a Cedar of Lebanon were making advances. The place not being of importance, the Cedar of Lebanon, the Fuchsia a hardy one (I believe the old F. gracilis), and the little Winter Aconite were all allowed to take their chance, and do for themselves; the result being the Fuchsias were the first to give way, and little Winter Aconite successfully maintained its own against the weeds and other plants that usurped the space for some time, that it was only when the Cedar branches had so completely overshadowed it, and the common Ivy had occupied the ground some time, that the little spring favourite eventually succumbed. I have seen it struggle on some years amongst grass in a dry situation, and its seeds when allowed to shed themselves on the turf generally come up in great abundance, more especially, I believe, when the soil is of a chalky or limestone character. I am not sure that it is limited to soils of that kind; on the contrary, I think it will grow on most ordinary soils, provided it be not too wet, and perhaps a too stiff clay is also pernicious to it. But I believe one of its greatest enemies is the spade; for coming up, as it does, in January, and as usually its foliage is ripened off and also its seeds during May, there is all the rest of the year wherein no outward vestige of it is seen, and consequently, either from design or accident, it gets disturbed, and is rarely put back again so well as it is taken up that it gets lost. Still it clings to life tenaciously, and is often met with coming up where least expected; but it is best when left alone.

If it be advisable to multiply it, we very often do so when it is in flower, as it can be the more easily seen, and lines or edgings of it are easily made then; and as an edging for clumps of shrubs I need not say anything in its favour; while Roses and other things in beds may in like manner be also the better for its presence, and even patches of it in the herbaceous border are very beautiful coming up where there is nothing else. Care ought, however, to be taken to mark it with a stick, so that during the summer it be not meddled with. Tufts also in the rockery are charming; and even on the narrow border adjoining most dwelling houses, where creepers are cultivated, a few plants of this peeping up in middle of January, and cheering by their richly coloured petals that dull period of the year, are a source of attraction which after-objects, coming when other things are plentiful, fail to do. That and many more reasons combined give this plant a claim on our attention on which it would seem needless to enlarge further than to say that it is propagated freely from seed, which I believe is best sown immediately it is gathered; but even then it does not come up until the following spring, whereas if kept till then it is not at all certain of coming up that year. The seeds when ripe are not small, and the young plants do not seem miffy; on the contrary, we often meet with self-sown plants growing in the most unpromising places, the gravel walks being as often occupied by them as anywhere. And perhaps the best advice towards its management is to let it alone.—J. Robson.

HARDINESS OF CORDYLINE (DRACÆNA) INDIVISA.

Referring to the notice of this plant in your last issue, permit me to observe, that in the rock garden at Messrs. J. Backhouse & Son of York it has now been fully exposed to all the vicissitudes of our northern clime for the last three years, and it is quite fresh and green. It is growing on the side of a bank, elevated about 4 feet above the walk, in a dry and poor soil fully exposed to midday sun; in fact, it must from the position in which it is planted be an extremely dry and hot situation for the plant during the summer months. In such a position the foliage will be thoroughly well ripened before the wet and cold set in. It may possibly be owing to this circumstance that this Dracæna has so far borne our winters, including the last severe frost, without sustaining the slightest injury. At the same time the plant is without doubt perfectly hardy, or it would have succumbed to 30° of frost, and is therefore a most valuable acquisition to our hardy ornamental plants.

It will, I doubt not, prove to be a handsome object for planting on lawns, or in vases placed in such a position as to be seen easily from the window, or for cultivating in pots and used for table decoration, or for standing in an entrance-hall, and for any similar purposes. As it may be cultivated with perfect success in a cold frame, or where there is a glass house, without artificial heat, it would be perfectly at home there, and would be in such a position a most useful and valuable plant.

The habit is that of a narrow-leaved Yucca. The leaves I measured (those in the centre which are erect) are from 12 to 15 inches in length; the older ones are from 18 to 25 inches in length and are only half an inch in width. Many of these are recurved towards the outer half of the leaf, which gives the plant a graceful appearance. Midrib of the leaf prominent on the under surface, and is of a yellowish colour. Veins conspicuous and semi-transparent when held towards the light, and extremely tough. The leaves are so arranged as to cause the whole plant to form a circular plume.

There is a variety with red midribs, which is, I believe, named D. indivisa var. lineata.—R. P.

Nectarines on Peach Trees.—With reference to the singular fact mentioned by Mr. Abbey, page 69, I would remark that

the Early Alfred Peach was raised from a stone of Hunt's Tawny Nectarine.—G. S.

LAXTON'S CONNOISSEUR AND OTHER PEAS.

As "R. H. D." has called attention to my Pea Connoisseur (see Journal January 21st), and wishes for its history, I need have no hesitation in giving its origin, as I make no secrets of the pedigrees of my seedlings. Connoisseur was obtained by crossing Ne Plus Ultra with Evergreen, also a seedling of mine; that variety being the result of crossing a deep green-seeded selection from Prizetaker with Advancer, the offspring, *inter alia*, being a rich-flavoured, late, green-seeded Pea.

As a rule these green-seeded Peas, although advantageous for keeping their colour even when cooked quite old, are not prolific; this, however, is not a fault of Connoisseur, as it is very prolific, and lasts long without being subject to mildew. But the truth must be told, it will never be a seedsman's Pea, as the seeds being so sugary do not usually harden or ripen well, and consequently fail to give the usual proportion of growing seed. The dry seeds when cooked have almost the flavour of young green Peas, and may, perhaps, suit the vendors of "green Peas all the year round." I am not without hope that from Connoisseur a race of Peas may be obtained having in its ripe seed the rich green-pea flavour fully and permanently preserved—a point not yet attained, as evidenced by the good-looking but insipid-tasting canned green Peas, often palmed off on the unsuspicious guests at hotels as fresh green Peas.

The seed of Connoisseur is almost devoid of farina, and would, I think, grind with difficulty. All these sugary and high-flavoured wrinkled Peas, including Dr. Hogg, require some care in harvesting, and the seed should be carefully picked, as otherwise those seeds which contain the most farina and the least of the rich marrow flavour will predominate in the struggle.

All heavy-seeded Peas, such as Supreme, Superlative, and the green Marrow, and round Peas generally, should be cooked young, and before their sugar is converted into starch, as only then is their flavour first-rate. People often keep Peas, and especially new sorts, for eating until they are fat-podded and fit for show, whereas they are then only fit to convert into pork. This treatment affected the character of my Prolific Longpod, Supreme, and Superlative, and accounts for the extremely varying reports respecting them which one reads and is sometimes obliged to smile at. Those who had them cooked young describe the flavour as excellent; those who cooked them when fit for show execrating them. Connoisseur is a remarkable Pea, but I do not value it so much as Dr. Hogg, Unique, or Supplanter—the three certificated Peas sent out for me by Messrs. Hurst this season; and in this, as in most instances, my own experiments correspond with the results of the trials by the Royal Horticultural Society.—Thomas Laxton, *Stamford*.

FLOWERS CHANGING COLOUR.

In your Journal of January 14th you speak of flowers which change colour. I have been long wishing to learn how to avoid it in one particular instance—namely, in the common blue Cornflower. About five years ago I purchased a pot in full bloom. I carefully saved the seed therefrom, and the following year I had double the quantity, and still a lovely blue; again I reserved the seed, and sowed in the spring, but my pretty blue flower had changed into pink, dark violet, mauve, white—indeed, any colour but the blue which I wished for so much, as in making-up a bouquet it is so useful. The most provoking part of the whole is, too, that I cannot purchase the seed anywhere. When I inquire everyone says, "Oh, yes! I know what you mean—it is a very common wild flower—we don't keep it." And every year now crops up the aforenamed pink-violet imitation Cornflower, mocking me as it seems. I have given orders to my gardener to exterminate it this year if possible. Can you tell me where I can buy this common (?) blue Cornflower, such a little gem as it is?—A Little Savage.

Leeds Professional Gardeners' Friendly Benefit Society.—To meet a want that had been long felt by gardeners in the neighbourhood of Leeds, about nine years ago it was determined to establish a Society where, under its auspices, all could meet together to impart and receive aid and instruction, and also to cultivate good fellowship. Great success has hitherto attended the Society, which no doubt is in some measure owing to the praiseworthy efforts of some of the principal officers, and more especially to the indefatigable Secretary, Mr. W. Tunley. Their dinner on the 13th of January was very successful.

NOVELTIES IN THE ROYAL GARDENS, KEW.

In the Palm house a new and undescribed species of Dracæna is in flower for the first time. It is African almost without doubt, and will shortly be figured, when a name will be given. A single stem supports a large crown of green leaves; they are narrow and about 3 feet long, with a pale yellow midrib prominent on the under surface. The flowers are small, of a pale yellow colour, borne in several axillary panicles. Their smell is not agreeable, but at a short distance it is not perceptible. D. fragrans will soon be in flower. It is a native of Guinea and Sierra Leone, and is the most nearly allied species to the above, though the panicles are all terminal. Under this name D. latifolia is often cultivated. In this house also Jonesia Asoca is producing a brilliant mass of orange-red flowers on some of the branches. It is not often cultivated, but would doubtless repay attention. The leaves and habit remind one of Brownea, but the flowers are different, and besides are of a structure unusual in the order Leguminosæ. They are without petals, though on that account of no less beauty, as the calyces assume their appearance; are tubular with a four-divided limb, like the corolla of Ixora. From the ornamental character of this tree it is largely planted throughout India, where it is a native, and in the Mauritius. Ushoka is the name given by the Bengalese. It may either be struck from cuttings or grown from imported seeds. The latter should be sown in pots with a bottom heat of about 85°. Seeds of large size when sown under glass should not be placed at a depth in proportion to their size; perhaps the nearer the surface the better, provided that the covering is sufficient to keep them moist.

In the stove a large male plant of the rare Cycad Stangeria paradoxa has a fine cone, which is very richly scented. It was first named as a Fern by an eminent botanist, who called it Lomaria eriopus, thus showing how difficult it is to name peculiar and little-known plants from imperfect material. When the cones were first seen its true character was at once evident. This was for a long time the only known species; but Dr. Regel has recently published as distinct his S. Katzeri. A kind supposed to differ by having the pinnæ more irregularly toothed was imported some time ago, and called S. schizodon. The character mentioned would seem to be of slight value, leaves being found to differ widely on the same plant.

TEMPERATURES FOR WINTER CUCUMBERS.

Seeing so many interesting articles in the Journal lately on winter Cucumbers, and such difference of opinion with regard to temperature and mode of treatment, I will briefly state the mode of treatment adopted here where Cucumber-growing is carried on extensively.

The two houses for winter work are span-roof, 64 by 24 feet, with eight rows of 4-inch pipes, in one of which Pines are grown, planted out in beds without any bottom heat, from which good fruit are cut averaging from 2 to 2½ lbs. The Cucumber seed is sown in a glass hoop about 4 inches wide, on a slate or tile, and covered with a square of glass and placed on the pipes. The seedlings are up in a day or two, and are then potted-off, one or two in a 3-inch pot, and placed in bottom heat till fresh roots are formed; they are then placed as near the glass as possible. The temperature is from 65° to 75° by day, and stands about 60° to 65° in the morning. We have had the glass as low as 48° in the morning, and the plants have not in the least suffered. Provided the bottom heat is all right, a low night temperature suits them best.

We are much troubled with a small white grub, which eats away the extremity of the stalk of the plant, in consequence of which the plants so affected die quite suddenly. Several of our plants have gone off in this manner. Can anyone tell me what the grub is likely to be and how to get rid of it?—A Market Gardener, *Liverpool*.

Early Flowers.—We have Aconite fully out since the 16th of January, and now (29th), have also Snowdrops, Primroses, Crocuses, and Hepaticas. The latter open enough to see the

colour. I think this is very fair for Cheshire. [So it is.—Eds.] Christmas Roses still glorious.—A Lady in Cheshire.

THE WAY TO GROW FERNS.

Some years ago I commenced growing Ferns, and having consulted all the books on the subject that I could meet with, came to the conclusion that my gardener's ideas were correct.

The Ferns were potted in a mixture of leaf mould, peat, and sand; drainage in the ordinary way was carefully attended to. The pots were placed on stone shelves in a house heated with hot-water pipes, and the Ferns grew very much to his satisfaction, but not to mine, for they were no better than my neighbours'; so by degrees I altered my plan, and, as many of your readers would grow Ferns if they could do so without any difficulty, I send you my mode of procedure.

The hole in the bottom of the pot being broken out very much larger than the maker leaves it, I put in three or four pieces of broken pot, then some rich soil and old manure, just what should be used for Cucumbers, no peat, no sand; then I put in the Fern, and very gently fill the pot with good garden soil intermixed with a few small bits of soft brick as large as peas. The pot is placed on soil or ashes, perhaps partially plunged, perhaps surrounded with Lycopodium. In any case the soil is always kept quite wet—in fact muddy, and the Ferns grow as I never saw Ferns grow before.

The whole secret is in keeping them wet and warm, partially plunged, and thoroughly drained. You may take a pot-bound Fern, pull roughly the drainage from the roots, break off the fibres anyhow, repot it in wet soil instead of dry, and it will grow and flourish as it never would with ordinary treatment. I planted less than two years ago a little bit of Adiantum Farleyense root without a frond on it, and it now measures 10 feet 6 inches round.—H. L.

JOINING HOT-WATER PIPES.

I see (page 60 of the present volume) directions for making joints in hot-water pipes with iron filings. To these directions I should take exception.

In the first place, the admixture of sulphur has long been discontinued by the best hothouse builders as quite unnecessary and very dangerous, often cracking the joints; but I think it is quite time iron joints were discontinued altogether in the case of hot-water pipes. Where the pressure of steam has to be resisted it is quite another thing, but for hot water it appears very stupid to make a joint which is so difficult to undo again that it is easier to cut the pipe in two than get the pipes separated at the joints.

Pipes joined properly with Portland cement are just as good as those fastened with iron filings, they are put together four or five times as quickly, and are very easily separated again if it is required. I have hundreds of feet so joined; one of my houses, 100 feet long by 30 feet wide, has all cement joints; and all Mr. W. Thomson's pipes, some of them 200 feet in length, are put together in this manner. In saying these pipes are all joined with cement, I except, of course, expansion joints. In long lengths of piping, however the joints are made, two in 100 feet ought to be put in with indiarubber rings only, to allow of expansion. Before knowing this I had several pipes broken where the joints were made of iron filings. Of course the joints could not give way, and as pipes expand, say half an inch nearly when hot in 100 feet, and contract again to the same extent when cold, nothing is more probable than a breakage. If these pipes had been put together with cement it is probable one of the joints might have broken instead of cracking the pipes, and I should very likely have blamed the Portland cement, not knowing it had saved me a cracked pipe. How can we expect a long 4-inch pipe full of water to elongate and contract at every change of temperature without something giving way in time? An indiarubber ring here and there removes all danger.

But as in all other operations, however simple, there is a right way and a wrong one of making a cement joint, I will describe the right one. First of all it must be roped as in making a joint with iron filings, then filled with cement mixed as for laying bricks, then roped again, and finished with cement. Thus made a joint will neither break nor leak, whilst if roped once it is liable to do both. Pipes so joined will be ready to fill with water in twenty-four hours, are just as good as those made with filings, and can be cut out much easier if any alteration is required. The few pipes joined with indiarubber rings are in time very difficult to pull asunder, and almost impossible to cut, but are soon burnt out by flat chisels made red hot. Having proved the advantages of this system of joining hot-water pipes, I have no patience in watching men hammer, hammer, hammering at making iron joints which I know will take three times as long getting to pieces again if ever it is necessary.—J. R. Pearson, *Chilwell*.

JOTTINGS ON LAST YEAR'S GARDENING.—No. 2.

Artichokes.—Never was this vegetable so much in request or so fine as in 1874. It delights in an open rich vegetable soil, abundant manuring, and even sewage in dry hot weather poured around the plants, not upon them, in heat and moisture. By planting strong well-rooted suckers annually in April, they produce heads later than is afforded by established plants. The first heads were cut June 15th (remember, we are high and cold), and the last November 15th. It has been questioned whether the usual protection of litter is necessary in severe winters. I have not found the plants destroyed, but those protected produced heads much earlier in the season than the unprotected. The Purple and Green Globe varieties are cultivated. The Purple is the earliest, but is not so good as the Green.

Asparagus started and grew strongly, the supply being checked by the cold of late May and early June. The first heads were cut April 4th, earlier by seventeen days than in 1873; the last heads being cut June 29th, whilst the last heads in 1873 were cut July 23rd. This vegetable requires a rich, deep, light, vegetable soil, the alluvial deposits suiting it remarkably well, and though revelling in moisture is injured by water stagnant in the subsoil. It can hardly have too much liquid support after May, but the soil must be well drained. I have the ordinary kind of Asparagus—Giant or Battersea, and other aliases, growing side by side with Connover's Colossal, and of the same age, and can see no difference, only the head of Colossal is more knob-like, and is more round in the stem. Seed sown in April, 1872, had a few heads fit to cut in 1874. Some plants of the old kind (and the difference is slight), from seed sown where to remain, gave heads fit to cut when the same age as the Colossal. I have some hundreds of two-year plants of both varieties and in beds side by side, so that any difference is readily apparent.

Broad Beans.—The first crops were very good, but the sowings after the middle of May very inferior in productiveness. Early Longpods were fine. Early Mazagan and Beck's Dwarf Green Gem are too small and not earlier than Early Longpod, which gives double the crop. Seville Longpod I shall have this season, and it must give pods longer than 7 to 8 inches, or it will not beat the old Early Longpod, which grows fully those lengths in good rich soil. The Early Longpod or Seville are chiefly recommendable for their earliness and length of pods; Monarch Longpod for second and main crops, it being very productive and having very long pods, and Broad Windsor good; Improved Broad Windsor (Suttons'), being a great improvement upon the old kind, having as many sometimes as five beans of very large size in a pod, it is strong in growth and prolific of pods. Broad Beans were first had July 3rd.

French or Dwarf Kidney Beans.—Never finer. Osborn's New Forcing is good alike for forcing and outdoor, of dwarf and compact growth, with pods narrower and longer than Sir Joseph Paxton, and very prolific. It is unquestionably the best of dwarf kinds for forcing and early crops outdoors. Canadian Wonder as usual had the longest and largest pods, and was remarkably prolific; as also was Negro Long-podded, very fine and hardiest of all. The first dish gathered July 23rd; in 1873, July 24th.

Runner Beans.—Scarlet Champion had very much larger pods, and as many or more of them than the old Scarlet, which I have struck out. Though no white seeds were sown, some pods on some plants produced white ripe seeds. Why this freak of Nature? The first dish gathered August 18th; in 1873, August 17th. Wax Runner Beans were too unproductive in 1873, and were so little esteemed that it was considered our limited space could be better employed. Premier Runners will have a place this season. Maybe they will be superior to the Chinese Runners I had through the Editors in 1872, with pods long and narrow, and purple-streaked externally like a Negro Long-podded, dwarf, and ripe seed about twice the size of Osborn's Forcing, of the same colour as the ripe seed of that variety. Premier Runners remind me of the

variety above named, which I should have noted sooner only it offered no advantages over runners or dwarfs, though very prolific. In flavour it was a French Bean, but the pods too soon became old and stringy.

Beet.—The Chelsea is a flat-topped kind, the leaves lying almost flat upon the ground, has a medium-sized and fine-shaped root entirely below ground; in colour very deep crimson, free from whitish streaks in the flesh, and has no stringiness, the flavour being very fine and distinct. Those wanting uniform fine flavour will find it in this Beet. Dewar's Dwarf Red is the earliest, its roots attaining to a useable size by the middle of July, so that Beet may be had the year round. Whyte's Black is deeper in colour and larger than most, and when not sown too early—not before the middle of May nor later—is not subject to grow coarse, and is then a good kind. Those were all good the last season, Dell's Crimson losing none of its grand foliage-colouring from the drought, and it is a kind that has never yet run to seed with me the first season. Its roots, as also those of Pine-Apple Short-top, keep long into summer, but neither grow sufficiently large-rooted with me to be profitable. They may need more warmth.

Borecole or Kale.—These are not in request, only the Dwarf Curled (Veitch's) variety, and Cottager's are grown, both very hardy, the former having very fine, large, fleshy leaves, grand crowns, strong side shoots, and stand a long time before running to seed. Of Cottager's Kale the Green variety gives the best sprouts, and is most tender and pleasing. Variegated or Garnishing is very beautiful about Easter, the colour being so variable, and neatly curled. Prejudice, I suppose, hinders it finding favour for garnishing, and how desirable it is we should have easement from Parsley in early spring! The Borecoles are chiefly useful as affording greens in very severe weather, and a supply of their tender sprouts in spring. In cold parts they require to be planted-out early, so as to have them strong before winter.

Broccoli.—Snow's Winter is every season destroyed by frosts—*i.e.*, the spring frosts, and has been so four seasons consecutively. On warm borders it fares no better. The only way to have them here is to take up when the size of a teacup and lay-in in frames. It is as tender as a Cauliflower, and not far removed from one. Backhouse's Winter comes in after it, is hardier, and the leaves protect the head better. Veitch's Spring White has a nice close head, white, and delicious flavour, heading in March or early April. Cooling's Matchless comes in about the same time, the heads well protected, large and white. Mammoth I like for its dwarf growth, large and compact heads; but the leaves not covering the head it is high-coloured, and the flavour strong. Cattell's Eclipse has large compact heads, as have also Carter's Champion, but Lauder's Late White Goshen yields to no late variety in largeness, compactness, whiteness and flavour of head, and I have cut them on June 6th. The latest Broccoli of all is, perhaps, Late Queen (Suttons'), of very dwarf compact growth, and good compact heads. Perfection sent out by the same firm is of strong, self-protecting growth, having large compact heads, white, and good flavour. It is in season about April. Broccoli the past three seasons have done indifferently. This season they are on ground which has known no Brassica crop, and the result is not likely to be good. The first heads were cut March 2nd; in 1873, April 3rd, and the last June 11th; in 1873, June 5th.

Brussels Sprouts were miserable this season. The plants grew wretchedly before as well as after planting out, and the produce has been corresponding. In 1873 they were remarkably good. The difference is to be accounted for in their being put out in fresh soil and poor, coupled with the drought. The first were had November 15th; in 1873, October 13th; and the last March 30th, 1874. The kinds are Imported, and Scrymger's Giant.

Cabbage very good, and came in quickly in spring, and in autumn were fine from spring-sown seed. Hill's Dwarf Incomparable is hardy, early, and hearts quickly as well as firmly. Cattell's Reliance, also early and good; Wheeler's Imperial very fine and early, these being followed by Enfield Market and Nonpareil Improved, having fine hearts, very tender and good. Red Dutch is grown for pickling, and for autumn and early winter Hill's Incomparable, Nonpareil, and St. John's Day Drumhead, and Early Drumhead (Suttons'), the last two being valuable for their earliness and hardiness, not being so soon acted upon injuriously by frost as other sorts. Early Dwarf York is also a good sort for sowing in April for heading in autumn, being very sweet. Cabbage was first cut May 4th, and ever since up to the present. In 1873 the first were cut May 7th, and last November 21st.

Carrot.—Early Horn and Early Nantes, which is a capital second early, having a very small heart or yellow core, very tender. James's Intermediate Scarlet and Red Surrey are the sorts grown, the two first for summer, and two last for autumn and winter. The earlier become very maggotty after August, and the others did not escape. The first were drawn June 22nd; in 1873, July 14th. The best for frames, French Forcing.

Cauliflowers.—Except a few running to seed of the autumn crop prematurely this vegetable was very good, and yet our soil is light but full of "muck." Dwarf Erfurt Mammoth is a fine dwarf grower, early with fine close heads. Early London, early, and more tall, but very good; Walcheren being unsurpassed; King of Cauliflowers had very fine large close heads, as had also Large Asiatic and Stadtholder; Veitch's Autumn Giant under hand-lights disappointed, but for autumn and for taking up for protecting in frames is magnificent. The first heads were cut June 11th, the last December 29th. In 1873 the first were cut June 30th, and last, March 5th, 1874.

Celery.—Sulham Prize Pink (Suttons'), a capital sort, of moderate size; Williams's Matchless Red, stiff growth, very good, and keeps well; Major Clarke's Red, medium size, excellent; Sandringham Dwarf White, stout in growth and very good; Veitch's Silver White failed, bolting to a great extent, in 1873 this variety was good. The leaflets are very much serrated. Leicester Red need not be named, the difference between it and Major Clarke's Red, if any, is slight. The Turnip-rooted, or Celeriac, turned out a white sort with no root at all, and it came from Vienna, about a pound weight! So much for foreign seed nomenclature. It is a good white kind, not unlike Seeley's Leviathan. We use Celery only for soups before October; the last we had in 1874, April 24th, and last 1873, April 21st.

Chicory.—This sown early in April in rows a foot apart and thinned to 6 inches in the rows gives in autumn good roots, which are cut off about an inch above the root and stored in sand along with other roots in November, and as wanted at intervals of about a fortnight are placed in soil kept moist to the crown, burying the whole of the root part in a Mushroom house, and there give leaves in a fortnight equal to any Endive for salad. Any dark place will do if there is a gentle heat. The Large-rooted is the best, having broad fleshy leaves, and nothing near so bitter as the narrow scalloped purplish-midrib kind, which is only a slight remove from Dandelion. Chicory helps well in midwinter to fill the salad bowl. December 21st, it was first used last year; in 1873 the same time, and up to April.

Chervil and Cress.—I shall only remark that these are always expected to be at command winter and summer. A sowing of Chervil in early April and August will suffice, and if a hard winter it may be sown in pans or boxes, and grown in any light airy house where forcing is going on. Cress and Mustard should be sown every week from April to October outdoors, and the other half of the year under glass. Curled Chervil and Curled Cress are best.

Cucumbers.—Cox's Volunteer and Blue Gown were both good, preferably Blue Gown. Marquis of Lorne was also grown. It is a large and fine kind, but too large for everyday use. Tender and True has been added, also Duke of Edinburgh (Munro's) for this year; Ridge kinds do no good here.—G. Abbey.

(To be continued.)

RAINFALL IN 1874.

Osmington Lodge, Weymouth, Dorset. — January, 2.94 inches; February, 2.42; March, 0.66; April, 2.26; May, 0.61; June, 1.50; July, 0.98; August, 2.80; September, 3.74; October, 5.81; November, 3.38; December, 4.16. Total, 31.26.—C. T. Hall.

Effects of the Frost.—We are now beginning to see some of the effects of the late winter, especially among the winter greens. Though partly covered with snow Savoys, Cabbages, Brussels Sprouts, Curled Kale, and Broccoli have suffered severely, and are emitting a not very pleasant odour. Lettuces and Endive, though covered, have come in for a share of injury. Laurels with us have put on quite a brown appearance, and will not look themselves again until they have shed their leaves. Variegated Hollies have suffered much, and many of the common Hollies are shedding their leaves. Ever-

green Privet has also suffered, and many other hardy evergreens. Tender Roses are much injured. Potatoes in pits in some places have been frozen; heating apparatuses in many places have been tested during the late storm, and in some places have come to grief.—H., *Yorkshire*.

THE INFLUENCE OF HORTICULTURAL SHOWS.

COTTAGERS' GARDEN PRODUCE.

Amongst the many things deservedly receiving public patronage at the present time are horticultural shows; and apart from those provincial shows which claim to attract exhibitors from the greater portion of the county they are held in, others on a less extensive scale rise up in all directions, some of them limiting the exhibitors to such as reside within a given distance of the place where the show is held. Others are open to all comers, or offer prizes for certain classes free to all.

There can be no question but these horticultural shows are the best of all stimulants to amateur gardening, and a prize awarded to someone heretofore careless in such matters very often makes an enthusiast of him and stimulates him to further exertion; besides which, horticultural shows afford opportunities for that intermixture of classes which tends so much to enable one man to fully comprehend others, and removes many of those false ideas which all are liable to entertain, and a juster and better feeling is the result.

The number of such shows is certainly increasing, and with it the number of exhibitors. Gentlemen of position, having a laudable wish to encourage gardening among their cottager neighbours, start a cottagers' horticultural show on their own grounds, and in many instances give the prizes out of their own pockets, and invite their neighbours and others to come and see the show; and the show appears so satisfactory that next year it is determined to offer prizes for productions from gentlemen's gardeners apart from those offered for cottagers, and by this means a class of exhibitors is brought out that never contemplated exhibiting at all for competition. Now and then progress is marred by what all outdoor entertainments are liable to—a wet day; but even that does not always bring on bankruptcy, if other things be promising. Some good-hearted well-disposed individuals step in with assistance, and the next year greater exertions are made and the debt wiped off.

It has often been remarked that horticultural shows are now more numerous than desirable, and the object for which they started, which was the encouragement of good general cultivation, is diverted into a channel widely different to what its promoters intended. A certain number of good articles are prepared for the show, and the other things neglected. This view of the matter is carried too far, but it is very often true to some extent, and somehow or other those who give their whole attention to such matters get by degrees into the knack of so retarding certain things and forwarding others, that at the show day they can put in a better appearance than their neighbours, whose garden produce, if exhibited, or rather inspected, as a whole, would stand before them a long way. This is one of the incidental and unavoidable results of showing, and it cannot well be remedied even if it was desirable to do so, which is questionable, for the sight-seeing public, which are by far the most important patrons, would not be satisfied by anything short of first-rate quality, no matter how obtained; and consequently the honourable hard-working cottager, who has taken no more pains to secure exhibition articles than he has done to secure good crops and good quality in the whole of his garden, is but seldom rewarded with a prize. I heard one of the class remark in a tone of regret, "Ah! showing is a trade, and an honest man has no chance with the professional." This doubtless was taking a rather spiteful view of the matter, but to those who have witnessed the prize sheet of a cottagers' exhibition will find nearly the same list of names year after year. A remedy for this is difficult to contrive, for there is really no harm, but, on the contrary, merit in the cottager encouraging the growth, by all extra means he has in his power, of the articles he intends to exhibit, and if he wins a number of years in succession by fair and just means so much the more credit to him; but at the same time there is no question that it reduces the number of exhibitors.—J. Robson.

Vine-painting.—For "B. G.'s" information (page 77), if I had Vines infested with mealy bug I should at once, after pruning, construct a trough the length of my Vines and lay them in it, and with pure water drown the bugs. Should any remain I would repeat the operation, and with a brush, similar to a spoke-brush, brush off the remainder until rid of the pest, and then by pure air and pure water I would try to hold the pests at bay.—H.

POTATO-GROWING EXTRAORDINARY.

Towards the end of 1873 we gave a brief notice of the extraordinary yields of Potatoes obtained in the United States under the stimulus of the prizes offered by Messrs. Bliss of New York. In that year the conditions were that the prize of $100 should be awarded to that cultivator who obtained the greatest yield from 1 lb. of seed Potatoes. There were two first prizes—one for each of two varieties of the tuber, and minor prizes for the second, third, and fourth in each class. The greatest yield from 1 lb. of seed was 609 lbs., a quantity very justly regarded as extraordinary, and no doubt looked upon by gardeners and others in this country as a bit of Cousin Jonathan's "huncome." However unjust may have been the incredulity of the "blue aprons" as to the 609 lbs., we can but acknowledge that, when they read the report of the competition in 1874, they will be justified in refusing credence to the statements made until further details are forthcoming. Nevertheless, it seems from the abstract of the report published by the *Tribune*, that the competition has been fairly conducted; and referring to the names of the Committee who were entrusted with the awarding of the prizes, we must confess that we see no reason to doubt their *bona fides*, or the affidavits of the competitors. The results are, however, fairly astonishing, and can only be accounted for—if they can be accounted for at all—by one of three propositions—either the Potatoes grown must be wonderfully prolific, the soil in which they were grown exuberantly productive, or some method of cultivation unknown out of the States must have been adopted. Possibly, however, the effect is the joint result of the three causes combined in one happy man with the soil and the tuber.

The prizes offered last spring by Messrs. Bliss were open to the world, and amounted in the aggregate to $1500. Six prizes, varying in amount from $10 to $100, were apportioned to each of three varieties of Potatoes—the Early Vermont, Compton's Surprise, and Brownell's Beauty; the conditions being that the largest yield from 1 lb. of seed of each sort, grown without any resort to forcing or any unusual method of multiplication, should receive the first prize of $100. There were prizes also for the largest yield obtained from a quarter of an acre, the same varieties of the Potato being used. The entry for the competition comprised many hundreds of farmers and gardeners, nearly every State and territory of the Union, and some of the neighbouring provinces being represented. The competitors were compelled to find witnesses as to the truth of their statements, and also to verify them by affidavit. These statements were duly and promptly made, but owing to the illness of one of the Committee the report has been delayed. We can only afford space for the names of the winners in each class. For Extra Early Vermont, Mr. Alfred K. Titus of Wilmington, Vermont, is first with 708 lbs.; for Compton's Surprise, Mr. P. C. Wood of Esther, Illinois, wins with 900 lbs.; and for Brownell's Beauty, Mr. H. C. Pearson of Pitcairn, New York, is first with 1018 lbs.—a yield of more than a thousandfold! Besides the States mentioned above, prizewinners came from Minnesota, Kansas, Pennsylvania, and one from Nova Scotia, with the not insignificant yield of 615½ lbs., so that this extraordinary Potato-growing is not confined to any special locality in the North American continent. This astonishing productiveness, however, is not borne out by the results of the quarter-acre competition, for which there were so few entries that each was entitled to a prize, though from information which has reached the Committee there were many larger yields from quarter acres obtained by non-competitors. For Extra Early Vermont grown on a quarter acre the first prize was awarded to Mr. D. Steck, of Hughesville, Pennsylvania, for 6247 lbs.; the second and third prizes being awarded respectively to yields of 2642 lbs. and 2584 lbs. The first prize for Compton's Surprise was obtained by Mrs. M. A. Royce, of Home, E. Tennessee, for 7350 lbs.; and Mr. A. Rose, of Pen Yan, New York, carried off the first for Brownell's Beauty with 8899 lbs. Taking the last figures as a basis for a short calculation, it will be seen that they represent the very respectable yield of nearly 16 tons an acre, and although this amount has fre-

quently been surpassed in this country, especially with certain sorts, it is, we believe above the average of the regular Potato cultivators. It is unfortunate that more results on the larger scale are not forthcoming, for they would of course be considerably more valuable than those obtained from trials of "1 lb. of seed," because we do not know what is considered an "unusual method of multiplication" in the States. In favourable seasons, 1 lb. of tubers can be made to cover a very large piece of ground by taking off and planting the shoots as fast as they grow, and by planting cuttings. The quantity raised from a piece of ground of given dimensions is, *cæteris paribus*, the criterion of the merits of a Potato. The Committee (Messrs. G. Thurber, F. M. Hexamer, and P. T. Quinn), are men well known throughout the United States, and they assure us in their report that, while they abstain from comment on the "astounding yields from single pounds," a "most careful and scrupulous investigation" has satisfied them of the "correctness of the statements made." That the skill of the cultivators and the productiveness of the soil have had much to do with the result, is tolerably evident from the fact that two of the competitors obtained prizes for each sort, while three others obtained prizes for two sorts. The season is said to have been unfavourable, and that added to the ravages of the Colorado beetle diminished the crops of many intending competitors for the quarter-acre prizes to such an extent, that they considered their chances of a prize as hopeless, and accordingly did not compete. The three varieties mentioned above have been tried in this country, and received first-class certificates from the Royal Horticultural Society. They are undoubtedly prolific even here; but opinions as to their merits when on the table are divided, and on the whole are not very favourable.—(*English Mechanic and World of Science.*)

SPARROWS VERSUS GOOSEBERRIES.

On reading Mr. Abbey's article on sparrows I cannot refrain from saying a few words, although not in support of his argument, for I have had hundreds of large Gooseberry trees spoiled by sparrows; and to prove that sparrows alone did the mischief, I have many times gone round the trees after a fall of snow and watched them cover the ground with buds. It is generally in hard weather, but they eat them more or less all the winter months. I have known acres of good trees in this neighbourhood, not only about a town but in country places, completely spoiled by sparrows. Linnets I never yet saw take a single bud, and have watched them early and late. As to the sparrows eating caterpillars on Gooseberry or Currant trees, each year I see trees completely leafless, but never yet saw a sparrow touch one, and have watched them for hours among the bushes.

I have known the cuckoo to clear a large quarter of Gooseberry trees from caterpillars, and most of the migratory birds eat them. The new Peas in early summer suffer severely when seeds are scarce, and corn fields about towns and villages are almost destroyed. During this last ten years sparrows have trebled themselves in this neighbourhood, and during my sixty years' experience in and about a garden. My advice to all would be, Kill every sparrow you can.—JOHN ALLCOCK, *The Nurseries, Sandbach.*

FLOWERS FOR OUR BORDERS.—No. 47.

CYCLOBOTHRA ALBA.—WHITE-FLOWERED CYCLOBOTHRA.

The plants formerly placed in the genus Cyclobothra are now by common consent merged in Calochortus, the present species taking the name originally conferred on it by Douglas, of Calochortus albus. Having put this fact on record it may, however, be more convenient to the readers of a popular Journal like the present if the better-known name be retained in connection with the following description of this pretty and interesting hardy bulb.

The Cyclobothra alba is a bulbous plant growing about a foot high, with one radical leaf of considerable length (much longer than is represented in our figure), and from three to five shorter ones upon the stem, from each of which proceeds a lateral shoot bearing two flowers (sometimes, however, there is but one), with a pair of leaf-like bracts at the base of the peduncles. It is only strong bulbs which will produce the number of blossoms shown by our artist; usually there are but six upon the same stem. The flowers are drooping, of a globular form, and about 1½ to 2 inches in diameter. The three petals are externally convex, and have their edges closely approximated, being rarely separated to a greater degree than shown in our figure. In colour they are of a silky white, with a tinge of green near the base; they are bearded on their inner surface with long white hairs, which, under the microscope, have a flattened ribband-like form. The three sepals are of a membranous texture, oval-pointed form, and of a pale green with a tinge of purple.

The curious nectariferous cavity which characterises this genus is well seen in the present species, appearing as a linear or oval depression in the petal, at a short distance from the base, and secreting a sweetish fluid.

The stamens are six in number, with yellow anthers attached by their base to the filament, as in the Tulip. The ovarium is oblong, bluntly triangular, with intermediate furrows, and terminating by three short spreading stigmas. Seeds of an oval form, wingless, and of a purplish-brown colour. It flowers from midsummer to the middle or end of July.

Fig. 25.—Cyclobothra alba.

The Cyclobothra alba is quite hardy, but the bulbs suffer from excessive wet; when planted in the open borders it should therefore be covered with a small hand-light or empty pot during long-continued rains in autumn and winter. It does well in a mixture of peat and sandy loam, and should be planted in a warm well-drained border. If the bulbs are removed from the ground after the foliage has withered, they must be replanted not later than the end of October, as they usually commence their growth at an early period. It may also be grown in pots, and in this case may be protected in a frame during the winter months. Seeds are generally ripened, by which, as well as by offsets, it may be increased. The seeds are best sown as soon as ripe, but in that case the young plants must be kept in a frame through the winter. If the seed is preserved until spring, it will, however, vegetate without much trouble, aided by a little heat.

The genus Calochortus, as now arranged by Mr. J. G. Baker in his recent Monograph on Tulipeæ, includes twenty-one species classed under four subgenera. The present species and the closely-allied C. pulchellus, with yellow flowers, are the only two having globose drooping perianths, the rest having their flowers erect.—(*W. Thompson's English Flower Garden, Revised by the Author.*)

NOTES ON VILLA AND SUBURBAN GARDENING.

The Hardy Fernery.—I think it is not too much to say that a collection of hardy Ferns is an indispensable addition to the ornamental portion of a suburban residence, and when arranged upon a mound of rocks of a suitable size, &c., clinkers, or overburnt bricks, or among the roots and stumps of trees, they can

be made to assume in this artificial home so much of a natural appearance as if growing on the hedgebanks in the country, that they become doubly enjoyable to those who seldom have the opportunity of seeing them growing fresh and green as Nature has reared them. To this, however, something more may be added; for the rustic appearance of a fernery is an agreeable contrast to the more dressy portion of a garden, and if a sight is taken of them in a line with a bed of flowers they heighten the brilliancy of the flowers, and form a background at once very graceful and attractive. A group of Ferns arranged in a tasteful way is an excellent way of hiding anything unsightly, and the beauty and enjoyment of a summer-house can with little trouble be much enhanced by them whether arranged around the foot of it or planted in pots or boxes and stood around it. In the small enclosures we may call forecourt gardens attached to the fronts of a row of villa residences, and where the sun seldom reaches the plants growing there, Ferns grow luxuriantly, and if the stronger-growing specimens are planted in the soil the same as any other plant, they do not fail to please. In some of these gardens oval beds are struck out, and planted thus: The edging is either of Box, or the bed is cut out in the turf and a row of Snowdrops planted 6 inches from the edge. The bed is then planted with stools of some common and vigorous-growing Fern, such as Lastrea Filix-mas or Polystichum angulare, or some one or other of the Aspleniums, about 2 feet apart, and in the summer a coarse-growing scarlet Geranium is planted among them, the bloom of which rises up among the fronds of the Ferns and gives a very pleasing effect. Such a bed is a gay one with very little trouble or expense, and very suitable to such a position.

In constructing a fernery the space it is to occupy must be first determined on, because it is necessary to avoid all straight outlines. If it is long rather than broad the space should be broken up here and there with, perhaps, a hillock of misshapen stones of a corresponding size to the extent of space at command, and then terraced down in suitable places to a miniature dell, again to rise to the ordinary line with, perhaps, a recess and a projection here and there as taste may dictate, making it as rustic in appearance as the ruins of an old castle wall with the stones left as they fell.

Now it must also be remembered that Ferns like shelter, shade, and moisture, and it may not be so difficult to provide the two former as it will be to find moisture sufficient to carry them through a dry and hot period in the summer; and this is the most particular as well as the most enjoyable time of any. Moisture is necessary at such a time for the future benefit of the Ferns; and if the fronds can be kept fresh and green by its agency the more will their appearance lead one to admire them, because it is such a relief for the eye after gazing upon the bright flowers in the hot sun. Therefore, in building up the fernery, the soil under the stones is not so particular as to the mixture, but it must be porous, so that the water when applied may pass away quickly and avoid soddening the soil.

Generally speaking the roots of Ferns are of a wiry nature, and will cling to soil of an ordinary texture, but it ought not to be heavy. Some of the more delicate species may with advantage have peat and sand added to the soil, and some leaf soil; but none of them, whether vigorous or strong, are benefited by manure either in the solid or the liquid form.

Now a word or two as to the planting, or assigning the plants the position they ought to occupy. First of all, take care not to plant any of them too deep, but keep the crowns well above the soil as long as they are made firm, and plant the strongest growers first, allotting them their positions over the whole space, or they may be planted in groups here and there, and varied either high or low as it is wished. The dwarf species with finer-made fronds should be planted in prominent places, but not too much exposed, and, again, not immediately under those with coarse fronds so as to completely hide them from view. Some, such as the common Polypody or Polypodium vulgare, sends its stems or rhizomes completely over a projecting block if it finds sufficient earth or other substance to cling to; and therefore, where there is a prominent place to be thus covered this is the Fern to plant, and all those of a running or creeping nature should have suitable places provided for them.

Now, although a fernery is a very desirable thing to have, it is not everyone who can indulge in the luxury, but they may grow some plants in pots, which will form very conspicuous ornaments for the window, entrance-hall, or, in fact, for room-decoration. There is the Lastrea Filix-mas and Athyrium Filix-fœmina, Scolopendrium vulgare and S. undulatum or crispum very pretty, Lastrea angustata, cristata, and Osmunda regalis, besides many dwarfer species that thrive well in pots. It is the same with these as with those in the fernery—the pots must be well drained; and if kept in the rooms for any length of time they ought to be sprinkled overhead every morning, and the roots should never be allowed to become dry. They would be more delicate cultivated in this way than if they were in a more natural position outdoors. In the winter time when the fronds are dying down the pots should be plunged in coal ashes under a wall on the south side, and if severe frost set in the crowns may be just covered with some light material. In the spring, when the young fronds make their appearance, clear the crown of all rubbish, and keep a constant look-out for slugs, or they will eat several of them off in a night, and thereby destroy all prospect of a good decorative plant. After they are further advanced they may be taken out of the ashes and treated as above directed.—Thomas Record.

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 29.

Assuredly, as Sir John Lubbock remarked in his recent lecture on "British Wild Flowers considered in relation to Insects," the fact is noteworthy that Mr. Darwin was the first to draw attention to the special work many insects perform in transferring pollen either from one flower to another, or else from the stamens to the pistil of the same flower. It was amongst the Orchids that this naturalist noticed peculiarities which led him to establish his theory on the subject, I believe, as enunciated in a book published about 1862. Others have since trodden in his footsteps and amplified considerably, and of recent observers none are more deserving of honourable mention than Dr. H. Müller, Mr. Bennett, and Sir John himself. But I regard Mr. Darwin's position as singular in view of the circumstance that his eminent, though less famous, grandfather thought fit to attempt to poetise the "Loves of the Plants" in a composition cleverly, if too hardly, satirised in another poem on the "Loves of the Triangles." As a more recent poet puts it, plants

> "languidly adjust
> Their vapid vegetable loves
> With anthers and with dust."

And even a child can scarcely credit a fable which would assume that there was any affection in the matter. But taking up the imagery for a moment, the first Darwin described the amours, and no more; it was reserved for a second Darwin to give us a glimpse of the "go-betweens." There are, however, many flowers that scorn these, as Sir John points out, and need no help to fertilisation from the insect races. From the Hymenopterous and Dipterous orders it is, as we should expect, that plants receive this aid in return for the honey and pollen which serve to supply the needs of their visitors. The interchange does not always proceed without unpleasantness; and I can fancy that the juvenile portion of Sir John Lubbock's audience, as they heard him describe the odd mode in which the common Arum is fertilised by the imprisonment of insects, chiefly flies, in the tube until the ripe anthers had showered their pollen on them, the shrivelling of the hairs giving them liberty afterwards, may have said to themselves, "What foolish creatures the flies must be to visit any more Arums after that!" On the whole, however, it is to be concluded that we are more indebted to bees than to flies for services thus rendered, because, as a rule, bees are longer-lived; and as in some species they are storers of honey as well as eaters, they necessarily visit more flowers than do flies. Some set-off in favour of the flies may be pleaded from the fact that many of the flower-loving flies are also predacious, a few in the imago, but a number of them while in the larval state. And in passing we may note that sometimes, as in the genus Tabanus, we have flies regarding which we may have difficulty in deciding as to their merits or demerits. The males, true flower-lovers, are occasional visitants to gardens, where they attract attention by their lustrous eyes. A friend has described the expression of one species as combining "intelligence with pathos," but I fail to see that myself. These organs are of various colours: in one species of a golden green, lined and spotted with purple; in another crimson predominates, crossed by green bands; and in a third a bronzy hue of much brilliancy prevails. The Tabani have wings well provided with nervures, and the buzzing noise they produce is to some folks one of the pleasures (?) of summer. Not so the bite, certainly, for they will occasionally attack the human subject, and the approach of one of these flies—a much more veritable "horse-stinger" than the harmless dragon-fly—is often the cause of a panic in a herd of cattle. The larvæ of these insects, popularly known as Breese-flies or Clegs, live either on the surface of the earth or underground, and help to remove decaying matter, or, as is suspected to be the case in several species, they prey on other larvæ, molluscs, or worms.

Mention has not been made in this series of the Soldier-flies, insects both of beauty and utility, appropriately named from the martial qualities manifested by most of the perfect in-

sects, which visit flowers with a double object—the extraction of the honey and the destruction of other insects, some of which are amongst our enemies. The antennæ in these insects are longer than in many flies, the bodies broad, and elegantly marked with spots and streaks of a variety of colours. On the thorax is usually an array of spines, perhaps to prevent birds from attacking these insects, which do not appear at all inclined to take up the refrain, "Let me like a soldier fall," but show great alacrity in escaping danger by flight if alarmed. The common Chameleon-fly (Stratiomys chamæleo) is one of the familiar examples of the group, taking its name from the varied colouring displayed by different specimens; black and yellow, however, predominate, and the legs are also yellow. The larva lives in ponds or streamlets that have little motion; it has rather a telescopic structure, and respires from orifices in the tail, set about with hairs much in the mode of the larvæ of the gnat. One of the most peculiar circumstances in its history is, that the period of larval growth having passed, the creature rises to the top of the water, where it floats about, the pupa remaining within the loose larva skin, which serves as a kind of cocoon. Other larvæ of the family are semi-aquatic, preferring damp places or burrowing in rotten stumps; the larva of Sargus cuprarius lives in the earth, and those of its congeners. In these insects the bodies are more slender than in the typical representatives of the family, yet we find brilliant, almost metallic colouring.

Fig. 23.—The metamorphosis of stratiomys chamælio.

A curious group of flies is that represented by the genus Phora, for at certain times of the year parties of these may be seen resting on the glass of window-panes, and if a crowd of them should haunt a greenhouse, as may happen, the gardener is doubtful whether to consider them as neutrals or enemies. It may be that his readiest theory is that they have bred from some manure that he has had on the premises, and some of the larvæ really feed on decomposing substances, vegetable rather than animal, though. Thus, the larva of P. Dauci has been discovered in decaying Radish roots. I don't suppose it would touch healthy ones, and if gardeners leave Radishes to decay in the ground they must not wonder that insects interfere. The majority are parasitic, with a history somewhat obscure as yet, though some of the flies have been bred from punctured larvæ of Lepidoptera. Like those of common Muscidæ, these larvæ are footless cylindrical maggots, slightly narrowed at the head, and with radiating points at the tail, by which they retain their hold. The perfect insects fly, or, one might say skip, about with briskness, the wings being deflexed and fringed without transverse veins; a ridge on the thorax also gives to them the appearance of being hump-backed. Some people have likened these flies to sand wasps in miniature, the size varying from the twenty-fourth to the sixth of an inch. We have about thirty British species. Besides these, though belonging to the Hymenopterous order, we might place the insects of the family Proctotrupidæ, some so small that they only look like moving dots until we magnify them. Here the wings have scarcely any nervures, and the insects spring rather than fly. The larvæ, so far as is known at present, live in the eggs of other insects, chiefly of moths or butterflies, one small egg serving as food for three or four larvæ; it is doubtful how the shell is punctured. Teleas elatior, one of these, is a beautiful object under the microscope, the body being an intense blue, and the wings exhibiting prismatic tints.

The Ruby-tailed flies are insects belonging to the division of Hymenopters, called the Tube-bearers (Tubulifera), from the segments of the abdomen being formed into a telescopic tube, which, though it seemingly consists of a small number of segments, contains the usual complement, but modified. It is secured by a short footstalk to the thorax. The object of this structure Mr. Wood thus states, "Owing to the mode in which the abdomen is attached, the insect is able when alarmed to roll itself up in a ball, in which it is aided by the shape of the abdomen, the under surface of which is concave so as to receive the thorax. At the end of the retractile tube is a small sting-like ovipositor, capable of inflicting a smart prick when the insect is moved to anger."

The claim of these flies to beauty must be admitted by everyone who has seen the Chrysididæ careering in the sunshine by the roadsides or over flower beds, especially in gardens near woods. Also they may be noticed crawling or running over posts and palings, round orchards and plantations—not without an object. England owns nearly a score of species, all of bright colours, green or greenish blue, the abdomen in most of some shade of red or purple. One of our commonest species is Chrysis ignita, the larvæ of which are nurtured in the nests of sand-wasps, carpenter and mining bees, and even, according to some authors, in the cells of the hornet. One or two species attack the tunnelling wasps, conveying their eggs with ingenuity into the cell prepared by the wasp for its progeny. In a certain sense, therefore, the Ruby-tailed flies are of use, by keeping under other Hymenoptera, though of course many of the wild bees do no harm in gardens. Whether, like the

cuckoo, the larva of the Chrysis only devours the food prepared for another, or whether it sometimes kills the rightful occupant of the home it has entered, is a disputed point. The parent whose progeny is threatened does not always tolerate the intrusion, and instances have been related of sharp contests between a Ruby-tail and a bee or wasp. The former, however, chiefly acts on the defensive, by rolling itself into a ball when threatened by the indignant owner of the domicile. —J. R. S. C.

THE LATE MR. THOMAS WEAVER.

Will you permit me to add one little item to all that has been so well said by others concerning our good old friend? I had the privilege of visiting him some years back, and I was struck not only with his qualities as a thoroughly good, honest, and old-fashioned gardener, but also by his simple and unaffected piety. He was truly a humble-minded Christian man, and his utterances on these higher subjects were characterised by the same plain, good, common sense that marked everything that he did. He was another instance of the many I have known who in their dealings with the things of nature had not been led to ignore Him whose handiwork they are, but in whom they had intensified the love which they had gained by the reading of that other Book which alike testifies of Him.—D., *Deal.*

DOINGS OF THE LAST AND PRESENT WEEKS.

KITCHEN GARDEN.

Since sowing the Peas we have not had weather sufficiently favourable for getting-in any out-of-door crops. The early Potatoes are spread out very thinly on the ground in a cool place; but they have sprouted out rather more than usual, and we do not like to break the first sprouts off, as the first growths are not only the strongest, but if planted so they are undoubtedly earlier. The ground is too wet to allow of planting the tubers, and as the best resource under the circumstances they have been laid out in shallow boxes and placed on the floor of a cool glass house. This has been done to cause the growths to become stronger by exposure to the light and plenty of air. A very little fine mould has also been strewed amongst them, and when the ground is in good condition for them to be planted out the boxes are removed to the place, and the sets taken out of the boxes and transferred to the ground at once. We have started Potatoes in forcing houses to plant out in the open border, and would do it again at this time if the tubers were not starting into growth naturally. When this is done it is quite necessary to place the boxes containing the sets into a cool house before planting them out. It is a great advantage to have some sort of protecting material to place over the Potatoes when they have come through the ground, and this can be done very cheaply. A framework formed of a single rail fixed about 15 inches from the ground at the front and back of the borders, to a row of stumps driven into the ground, will support mats or straw coverings, or even old shading that has become useless for other purposes; but better than all are frame lights, which may be put on when the Potatoes are planted, and be left there permanently. This last would be not only the best, but would be in the end the cheapest if the first outlay can be got over, as not only is the protection the most effectual, but a vast amount of labour expended in covering and uncovering would be saved annually, and owing to the unsatisfactory condition of the labour market it behoves us to be on the alert, so that by mechanical or other appliances we may save in that respect.

A sowing of *Broad Windsor Beans* has also been put in on a south border. We like to get them in early, as the first sowing always produces the best crops. In another class of soil or in a more favourable district it may not be so, but we cannot find time to water such crops, and they become quite dried-up in the hot weather. We have not only to fight against a dry gravelly soil, but, what is quite as bad, a deficient rainfall. Last year our gauge did not register much over 18 inches. In such soil and under such adverse circumstances the only road to tolerable success is by trenching and working-in a liberal dressing of substantial farmyard manure. If our supply of that was restricted it would be enough to make us give up in despair. Mulching the ground with manure also serves to retain the moisture.

Sowed *Carrots* and *Lettuces* in ground vineries. For this purpose some dry loam was laid upon the surface of the ground after laying down some bricks on which to rest the vineries. Hicks's Hardy White Cos is the best Lettuce for our purpose, and the Early Horn Carrot; but it is needless to expect satisfactory results from very early crops without there is a good supply of dry mould at hand in which to sow the seeds, or some glass lights for protection from frosts. The Carrot and Lettuce are sown in rows 9 inches apart, and yet there is room between the rows for a crop of Radishes. Mustard and Cress is sown as wanted in boxes, which are placed in any of the forcing houses.

Sowed *Cauliflowers* in boxes, and placed the boxes in a hotbed to start the seeds. These come in immediately after the autumn-sown plants, which have been wintered in hand-lights and frames. Those in hand-lights are planted out in the autumn where they are to remain; they are the strongest plants selected from the bed. The smaller plants are pricked-out in boxes and merely protected from the weather until late in February or early in March, when they are planted out in the garden.

FRUIT AND FORCING HOUSES.

Pineries.—Little can be added to previous remarks in this department of our work. The higher minimum temperature kept up naturally requires that more moisture be allowed to evaporate in the houses. Two other matters which cannot be considered of minor importance must also be noticed, and that is watering and ventilation. The pots are usually plunged in some moist warm material, mostly spent tan from the leather-curers. Now the mould may become dry on the surface and be quite moist underneath, so that the utmost care is requisite in applying the water. Pines will not thrive if they are over-watered, and many fine fruits have been spoiled by this cause alone. Then fresh air is next in importance to good water. A small chink should be opened the first thing in the morning at the apex of the roof, not only in pineries but all forcing houses.

Peach Houses.—When it is perceived that the fruit is set it is advantageous to the trees to give them a thorough good syringing, which cleanses them from withered flowers, &c., and to continue the syringing every morning unless the weather is unfavourable. Trees that are now in flower are at the most critical period, and the blossoms should be set by shaking the trees or by using a camel-hair pencil. We have seen many different systems of training, but believe that the one having the most advantages is that of training the trees on the fan system to wires fixed horizontally about a foot from the glass. This allows of the fruit and young wood being thoroughly exposed to the sun, and they are also in the position where they are most freely exposed to the air. Trees planted on the back wall do very little good when the area of the glass is covered with foliage; but then if the trellis is arranged so that the sun can act upon the wall, a corresponding surface under the top lights must be unclothed from foliage, and this is just the place where the finest fruit is usually produced, so that there is no obvious advantage in trellising and being at the trouble of training trees to the back wall.

PLANT STOVE AND ORCHID HOUSES.

In many instances the stove is overdone with plants cultivated solely for their foliage. The rage has been for this class of plants during the last ten or more years, and a large proportion of recent introductions are not worth house-room. We must find room for some of the finer Palms and Dracænas, for such plants as Aralia Veitchii and A. leptophylla, for the more beautifully-marked Crotons and Pandanus Veitchii; but even then they must not be introduced to the exclusion of the flowering plants at present. Some of the easiest-managed Orchids may be had in flower if it is a house that requires a winter temperature of 60° or 65°; then the Phalænopsis grandiflora will be in beauty all the winter, if 50° or 55° be the minimum. The bridal Orchids are represented by Cœlogyne cristata, which thrives best in a temperature so low that it would be fatal to the beautiful Moth Orchid from Manilla. We find the pretty deep blue Eranthemum pulchellum very useful at this season; and for arranging in bijou bouquets the Euphorbia jacquiniæflora is not easily matched. They are also very easily grown. With the increasing light we also require a somewhat higher temperature; in the warmest stove 65° is now the lowest temperature. The weather has also been fine, which has allowed of more air being admitted. All plants that require potting are now being attended to, and a watchful eye is also being kept for all sorts of insect pests. Bougainvillea glabra wintered in a greenhouse has now been placed in heat.

FLOWER GARDEN.

Pruning shrubs, cutting dead wood out, and forking-over the ground in open spaces. The herbaceous borders are also being dug after some manure has been placed amongst the plants. However careful one may be to place labels to all the bulbous plants some of them get displaced, but now that nearly all spring-flowering subjects are above ground, digging can be performed with safety. Pinks had been thrown out of the ground or much loosened by the frost, and were pressed-in with the fingers, the ground being stirred between the rows. Removed withered and decaying leaves from Carnations and Picotees in frames. The lights are quite removed in fine weather, but no rain is allowed to fall upon them as yet; water is applied very sparingly to the roots. Auriculas in pots have been surface-dressed and watered. The plants show signs of returning animation after their winter rest. They have been plentifully supplied with water to thoroughly moisten the mould; the frame is aired, and the treatment similar to Carnations.

Potting-off all bedding plants and striking cuttings of all that we are short of. Calceolarias have not yet been removed from the shelter of a north wall. The cuttings were put in late, and

some have not yet started; they look quite green and healthy. A severe frost does not seem to affect them much.—J. Douglas.

PROVINCIAL HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

TRADE CATALOGUES RECEIVED.

J. Jefferies & Sons, Cirencester.—*Garden Guide.*

W. Potten, Nursery, Sissinghurst, Staplehurst, Kent.—*Descriptive Catalogue of Seeds.*

Pooley & Co., 23, Bush Lane, Cannon Street, London.—*Wholesale Priced List.*

W. Rumsey, Joyning's Nursery, Waltham Cross.—*Select List of Seeds, &c.*

Edmondson Brothers, 10, Dame Street, Dublin.—*Spring Catalogue of Seeds, &c.*

Robertson & Galloway, 157, Ingram Street, Glasgow.—*Descriptive Seed Catalogue.*

W. Samson & Co., Seedsmen, Kilmarnock.—*General Catalogue of Seeds, &c.*

J. Laing, Forest Hill, London.—*Descriptive Catalogue of Seeds, &c.*

Hooper & Co., Covent Garden, London.—*Gardening Guide.*

F. & A. Dickson & Sons, 106, Eastgate Street, Chester.—*Catalogue of Seeds.*

J. C. Wheeler & Sons, Gloucester and London.—*Little Book, or Seed List.*

H. Cannell, Station Road, Woolwich.—*Floral Guide.*

P. S. Robertson & Co., 33, St. Andrew's Square, Edinburgh. *Descriptive Catalogue of Seeds, Implements, &c.*

W. Bull, King's Road, Chelsea, London.—*Retail List of Select Seeds and New Plants.*

Drummond Brothers, 52, George Street, Edinburgh.—*Catalogue of Seeds.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Books (*Alicia*).—We know of no book on growing fruit for the London market. (*H. N. O.*).—The "Cottage Gardeners' Dictionary," with supplement, can be had of the publishers, Bell & Daldy, York Street, Covent Garden.

Seedling Apple (*Messrs. Brown*).—Your seedling Apple is very handsome in shape, very beautiful in colour, and very good.

Quarrenden Apple (*Inquirer*).—The flesh is usually pink near the rind, and becomes lighter until it passes into white nearer the core.

Arrangement of Ribbon Border (*C. P. B.*).—We repeat the statement so often made, that we cannot undertake such arrangements, but we most willingly criticise any which may be submitted to us. You have doubtless ideas of your own; let us see them, and we may then be able to assist you. You have ample materials for a rich and tasteful arrangement. Strive to make it good, not only in itself and for its position, but also in its relation to the surrounding features, of which you say nothing in your letter.

Mushroom Spawn (*R. Davies*).—Spawn may be found in dunghills, horse-mill tracks, and such places. In May a heap of the droppings of cows, sheep, and horses, or any one or two of them, without the admixture of any undecomposed straw, is to be collected, and one-fifth of road-scraping with one-twentieth of coal ashes added, the whole being mixed together with as much of the drainings from a dunghill as will make it of the consistency of mortar. Being well incorporated, it is then to be spread in a dry, sheltered, airy place, on a smooth surface, and beaten flat with a spade. When become of the consistency of clay it is to be cut into slabs about 8 inches square, a hole punched half through the middle of each, and piled to dry, an opening being left between every two bricks. When perfectly dry a fragment of the spawn is to be buried in the hole previously made. It will shortly spread through the whole texture of the slabs if kept in a warm dry place, when each may be broken into four pieces, and when quite dry laid on shelves, separate, and not in heaps, otherwise a bed will be formed for the spawn to run in.

Camellia Leaves Browned (*R. G.*).—The leaves sent show your plants to be in a "very unhealthy state," very small and spotted. The smallness of the leaves may be natural, but we know of none so small when in health. The ill health is a consequence of inactive roots, which may arise from an unsuitable compost, or it may be sodden and sour. The fault in the atmosphere is too much moisture upon the leaves, either from syringing or drip from the roof, which keeps the leaves wet, and drops hanging from their edges, the sun falling powerfully upon them then causes the brown blotches. The remedy is to syringe less or prevent the drip, and not allow the sun to fall powerfully upon them. Ours are shaded from early April to the end of September, and are not syringed at all, moisture being obtained by frequent sprinklings of the floor, walls, &c. Turn the plants out of the pots now, as they are not flowering, and remove any soil not occupied with roots, and repot in clean pots and well drained, just large enough to admit the roots and admit of about three-quarters of an inch of fresh soil all round, potting firmly, being careful not to injure the roots, but to work the soil in amongst them, so as to leave no cavities, and keep the neck or collar of the plants raised in the centre of the pots. Water carefully, but keep moist until the plants are growing freely, then water abundantly, but take care not to make the soil sodden. A good compost is three parts the top inch of a pasture taken off where the soil is a rich, light, sandy loam, one part sandy peat, one part leaf soil or thoroughly decomposed cow dung, and one-sixth silver sand, the loam chopped up rather fine, using it with its turf, the peat broken rather fine, and the whole well mixed.

Camellia (*J. W.*).—We are sorry we cannot name it. Florists' flowers can only be identified by those who specially cultivate them; they are in legions.

Heating Greenhouse (*Dr. Andre*).—Have a small stove boiler and 2-inch hot-water pipes; a flow and return all round the house except the doorway would be sufficient to exclude frost, to dry up damp, and promote a circulation of air in dull weather. You may have the stove outside the house in a shed, or in a hall or corridor if convenient, or the stove may be inside the house, having a funnel or pipe to carry outside the products of combustion. The price would not be much greater than a flue, but for expense write to those advertising in our columns and ask for estimates.

Protecting Fruit Buds from Small Birds (*A. G.*).—Boil a pound of quassia chips in four gallons of soft water ten minutes, and add to it as it cools a pound of soft soap, and add those in sufficient quantity to a paste formed of equal proportions lime and soot, passed through a hair sieve to form a liquid that will pass through a syringe, and eject that over the trees. The lime ought to be fresh slaked, and adding the soot afterwards. The composition is good against insects, lichen, and moss, as well as for protecting the buds from birds. Repeat if washed off, but usually one application suffices.

Protecting Iron Cistern from Frost (*P. C.*).—The best plan is a wood casing, allowing a 2-inch space between the wood and the cistern, and fill this with dry sawdust. The top should be protected in the same way, excepting, of course, the supply-pipe and overflow, and the pipes are best encased in wood filled with sawdust, or a straw or hay band wrapped round them.

Potting Rose Cuttings (*E. L. W.*).—The cuttings now rooting would be best potted if you intend to grow them in pots, and place them in the cold house or in a frame. For outdoors they should be potted and kept in a cold frame until they are well rooted, when they may be planted out, having been well hardened-off. You mistake about Gloxinias and Achimenes not being mentioned in the "Greenhouse Manual." They are mentioned in the calendar for March, April, May, &c. Williams's "Stove and Greenhouse Flowering Plants" may suit you. It may be had through any bookseller.

Muscat Vines Breaking Badly (*H. H. B.*).—Muscats early in the year usually start indifferently, and require to be brought on gradually, the atmosphere being kept very moist, as also the rods; these being depressed, as stated by Mr. Douglas a short time since, with a moderate temperature to begin with, and gradually raised. Their not breaking in your case is not depressing the upper part of the canes, bringing them at least level with the eyes at the lower part of the Vines. The Vines we presume are planted inside; or the bad breaking may be due to the roots being in a cold, wet, outside border. We should depress the rods now and maintain a temperature of 60° at night, 65° to 70° by day, and keep very moist. Vines this season have broken as well as we can remember.

Night-scented Stock Culture (*Somerset*).—The plants require an abundance of air and light and very careful watering. Pot-off the seedlings three in a 3-inch pot, not burying them deeper than the seed leaves, and water carefully, shading from sun until established. When the roots are showing at the sides of the pots shift into 5-inch pots, which are sufficiently large. Two parts loam, one part leaf soil, with a free admixture of silver sand will grow them well. Picotees sown last June and wintered in a greenhouse will, if planted-out in April after being well hardened-off, probably flower outdoors this summer. They ought to have an open situation.

Cucumbers Growing in Vinery (*Idem*).—They will grow in 11-inch pots, but 13-inch are better. They will require top-dressings with rich compost. Boxes may be 15 inches long, a foot wide, and a foot deep. The trellis for them ought not to be less than 2 feet from the Vines. If the roof of the house be closely covered with the Vines, the Cucumber plants will do little good beneath them.

Heating Houses (*J. P. of York*).—The houses would be heated more economically by a boiler than by flues; two furnaces consume more fuel than one, and you will not require a larger furnace for the boiler than for one flue. Two 4-inch pipes along the front and one end will be sufficient to exclude frost from a lean-to house if the width does not exceed 15 feet; if wider they ought to be taken along both ends, and all round if a span. To give a stove heat or for forcing Vines early in the season you will require twice the quantity of piping as for the other houses. It would be best to take the main flow and return along the back of the houses through a shed or sheds, which will be useful for Mushroom-growing, or if the roof were of glass for Ferns, and from these branch to the several houses, having valves to each, so as to work each separately or together.

Vines to Fruit Late (*Inquirer*).—Your Vines being Black Hamburgh need not be started, but allowed to break naturally, as they will in April or earlier, and need not have greater aid from fire heat than to keep the temperature from falling below 50° after they are in leaf, and when in leaf securing to them a night temperature of 55°, though it may in the morning fall to 50° without injury to the Vines or crop. In August and early September, or when the Grapes change colour, it may be necessary to afford a little fire heat by day if the weather be dull, cold, and wet, so as to cause a circulation of air, or allow of its being freely given without lowering the temperature below 65° to 70° by day, and 60° at night. The Grapes will colour in a lower temperature, but they will not be so rich in flavour, nor keep nearly so well as those ripened in a higher temperature. The Grapes will be ripe at the end of August or beginning of September; and the atmosphere being kept dry, having air day and night, and no moisture in the house from plants, they will hang in good condition until the new year.

Nertera scapanioides (*J. Field*).—We do not know the species. All those of the genus known to us are creeping plants, and half-hardy.

Sea-kale Pots (*E. M. P.*).—For so small a number as four the expense of packing and carriage would be more than equivalent to a retailer's charge.

You had better use four 18-inch flower pots, putting a cork into the drainage-hole of each.

Bedding Plants from Seed (*C. R.*).—In addition to Lobelia, Pyrethrum, Dell's Beet, and Phlox, you may have Ageratum Imperial Dwarf (blue), Alyssum maritimum (white), Centaurea candidissima (white foliage), Cineraria maritima (white foliage), Cuphea platycentra (red and purple), Linum grandiflorum coccineum (crimson), Nasturtium King Tom Thumb Scarlet (this is the best scarlet), N. King Tom Thumb Golden, Saponaria calabrica (rose), Scabious Dwarf, double (red, white, crimson, and maroon), these are fine for cutting, Senecio elegans, double vars. (crimson, lilac, dark purple, red, and white), Tagetes signata pumila (yellow), Tropæolum compactum coccineum (scarlet), and T. compactum luteum (yellow).

Heating a Greenhouse (*Idem*).—Your house having two 4-inch hot-water pipes along the front and one end, and the cubic contents being 1200 feet, would be heated sufficiently to exclude frost. The bore of the barrel pipe will not, we presume, be less than 1½ inch—it ought not, and the boiler must be of sufficient power to maintain the 4-inch pipe surface at a temperature of not less than 18°.

Sea-kale Forcing (*H. A. P.*).—The bed of Sea-kale may at once be forced without fear of its coming weak, as it will now start freely with only a gentle heat.

Potatoes for Forcing (*Idem*).—Queen is not good, nor any of the Victoria type. Forcing Potatoes require to have a short haulm, and mature early. Sandringham Ashleaf, Myatt's Prolific, and Veitch's Ashleaf are the best kinds, and the last-named the best of the three.

Jasminum nudiflorum (*Idem*).—The leaves are those of a sickly Orange, and have been covered with fungus arising from scale. Sponge with soft-soap solution 4 ozs. to a gallon, and at a temperature of 120°. The flower is Jasminum nudiflorum.

Soil of New Garden (*H. B.*).—Burn 2 feet in depth of all the subsoil clay, and mix it with the one foot of the lighter surface soil.

POULTRY, BEE, AND PIGEON CHRONICLE.

THE EXHIBITION DORKING.—No. 7.

BY T. C. BURNELL.

No difficulty will be found in making a broody hen take to a strange nest, the only precautions necessary will be to move her when it is dark, to give her a china nest egg or two, and to keep her shut in upon the new nest till she becomes accustomed to it. It will not be advisable to put the good eggs under her for a couple of days, till she has become thoroughly used to being taken off and put on the nest again by strangers. This should always be done every morning, and the hen put into a coop or other convenient place where she can be easily caught, with food and water for her to eat, and left there for about twenty minutes, and then be replaced on the nest by hand and shut in. If a regular system be adopted it is astonishing how many hens may be kept going in this way with very little trouble.

Two days before the eggs are due to hatch they should be well soused in tepid water when the hen is off the nest, and after being left in the water for two or three minutes they should be replaced, and the hen put on top of them. This will go a long way in preventing the chickens from becoming stuck to the membranous lining of the shell. If fresh, Dorking eggs will hatch on the twentieth day; but if stale they may be a day longer. For this reason the eggs in a sitting should as nearly as possible be of the same age, so as to hatch out altogether; but on no account should the hen be interfered with till the expiration of at least twenty-four hours from the appearance of the first chicken. I consider it waste of time to help chickens out of the shell. I have often done so, but believe it to be far better to let them die at once, as if they are not strong enough to get out of the shell they are pretty sure to die afterwards, and at all events will never make prize chickens. If possible it will be better to sit two hens on the same day, so that if the eggs hatch out badly we may be able to make up one good brood by putting all the chickens under one hen. A little sulphur should always be sprinkled in the nests of the sitting hens, or otherwise they are likely to become infested with vermin.

The hen-coop as illustrated in the accompanying sketch is well worthy of the attention of amateurs. It has been designed by Mr. Henry Lingwood, who for many years has been one of the most successful exhibitors in the poultry fancy. Last year he very kindly let me have one as a pattern, and I found it answer so well that I have asked and received permission from him to have it drawn for general information. It combines every requisite for rearing chickens successfully, and with it no shed or coop-house is required. It also possesses the merit of being vermin-proof when shut up, and this, too, without the ventilation being at all impeded. Owing to an error in shading the engraving is not so intelligible as I could wish; but I will endeavour to make it a little more simple by explanation. Most hen-coops are entirely inadmissible for outdoor chicken-rearing for two reasons: one, that the wet drives into the front of the coop; the other, that in heavy rain the wet runs in underneath the sides. In Mr. Lingwood's model coop both these disadvantages are avoided, as the roof projects over the open front, and effectually keeps out the rain; while a wooden tray is made to fit inside (which should be always kept filled with sand or dry earth), which entirely keeps the little chickens out of the wet. The flap-door, which in the woodcut is seen lying on the ground, hinges at bottom on hooks, and when turned up and secured with a button, fastens the coop up for the night, secure against fox or rat. The top part of the open front is made of small-mesh wire, and should be placed perpendicularly, and not be made, as in the drawing, to lean forward. This, besides giving light and ventilation, will be found convenient for feeding the chickens through on a very inclement morning when it is not desirable to let them run out at once.

When twenty-four hours old the chickens may be safely put into such a coop as I have described, or into any other description of coop with a waterproof roof. The hen should be fed and watered, and the chickens too should receive their first feed of bread crumbs softened with milk, canary seed, or some such little delicacy.

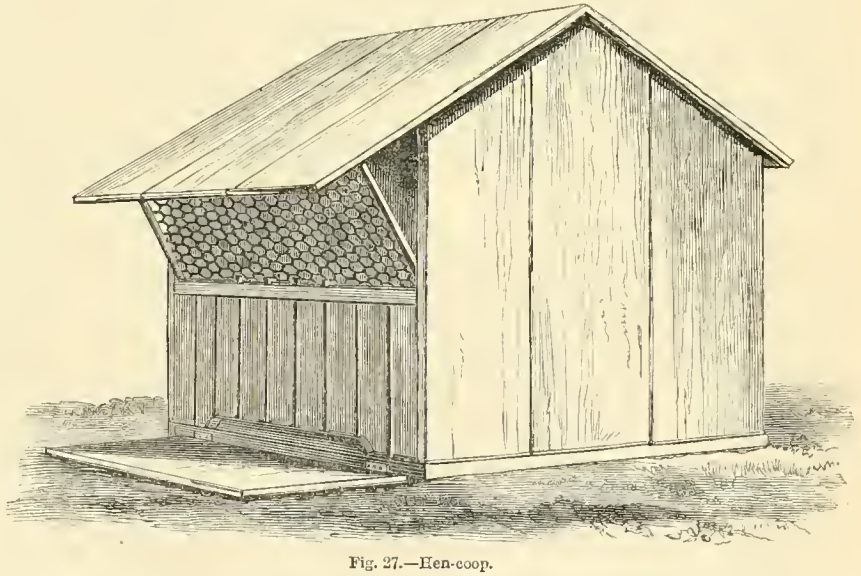


Fig. 27.—Hen-coop.

HARD CROP, OR CROP-BOUND.

This is undigested food in the crop either of fowls or Pigeons. It arises from being fed on food hard to digest, and consequently digestion does not take place fast enough to satisfy the cravings of hunger, hence the fowl or Pigeon keeps eating until it gorges itself. Hard crop will be caused by the bird being chilled while at roost. I advise all to avoid strong draughts of air. There needs no surgical operation for either fowl or Pigeon. By taking a penny tin extinguisher with the top cut off you will be provided with a funnel of proper shape, but I prefer a gutta percha one, as it is not so likely to hurt the throat or mouth of the bird treated. Place the funnel in the mouth, and then pour in as much warm water as the crop will hold; then work about with finger and thumb, squeezing well about till you get it into a liquid state; then place the finger of the left hand between the sides of the beak, the front finger of the right hand upon the tip of the lower half of the beak, and with the thumb of the same hand you may easily empty the crop in a few minutes. Then after awhile refill the crop as before with warm water, and so on till quite empty; then rinse-out well with warm water, and give the fowl some bread soaked in some warm milk. Some give bread soaked in ale, but unless the bird has fallen away in flesh or is weak it does not require it. Do not let the fowl have any hard food for a few days. In the case of Pigeons, if the bird will eat

bread give it; if not, rape seed is best, and in a few days give it split or crushed corn, but on no account whole corn. Old birds ought to be fed on crushed corn always.—W. Woodhouse, *King's Lynn.*

DORKINGS.

I feel very loth to take exception to anything that my friend Mr. Coke Burnell may say on the subject of Dorkings, and yet there is a passage in his interesting contribution of last week to which I should like to call his attention as well as that of other Dorking fanciers.

With his statement respecting the brief span allotted to Dorking cocks I quite agree. I recently bought for a trifling sum a cock whose shape and style I much admired, and which, curiously enough, I found had passed a portion of his time in Mr. Burnell's yard, in the hope that I should be able to use him for breeding, but at present he seems of no service. I should think his age is about three years. "Dorking hens, however," says Mr. Burnell, "do better; and I now know," he continues "a dark Dorking hen which has twice won the cup at the Crystal Palace Show, and which is still flourishing and winning, though certainly over eight years old."

As I happen to have won the Dorking cup at the Palace in the old class at the two last shows, I felt rather puzzled when I read those words. The hen that won the cup at the Palace in 1874 is not yet four years old. I am glad to say that she is still flourishing and winning, as she was given the cup at Bristol by a Judge who had never seen her before; yet I should indeed be sanguine if I expected to win with her until certainly over eight years old. But possibly Mr. Burnell is alluding to another hen; if so, I hope we shall hear something more of this interesting old lady.

My hen, though not four years old, is beginning to look very aged about the eyes, and another valuable hen that I kept for several years—I mean for three or four years—became so pitiable an object that I was really glad when an accident put an end to her existence.

Whilst writing I should like to say a word on a point respecting which I fear that I differ from some of my fellow fanciers. I see sometimes remarks which appear to indicate that Dorkings ought to be short on the leg. I do not believe that birds which are short on the leg ever can be, or at all events are, so heavy as those whose "columns of support" are longer. As weight and size are important features of a Dorking, a tolerable length of leg seems to me essential to a really fine bird. I am not advocating "leggy" birds; on the other hand, I wish to say that from my experience I think it a great mistake to insist upon a Dorking being a decidedly short-legged bird.—E. Bartrum, *Berkhampsted, Herts.*

HOUDANS.

Wishing to breed Houdans of a true strain, I hailed the appearance of the standard for the same in the *Horticultural Journal* of June 4th and 11th of last year. With this standard before me, I must say the awards at the last Birmingham Poultry Show are a puzzle to me. I was not there to see, but I read in a contemporary journal, "Second-prize pullet had palpably blue legs." Is this right? We were under the impression that they should be white spotted with black.

In the *Horticultural Journal* of December 3rd:—"First cock is a tall bird, thorough French Houdan in look, his only blemish being some rudimentary feathers on his legs. Second well marked and large, but tuft poor, and feathers appear on his legs too. First pullets very large, but too dark in plumage, and one with a poor tuft."

At the Aberdeen Poultry Show of the 8th and 9th ult. I saw the birds. The first-prize (as also the second if I remember rightly) had only rudimentary combs, and seemed very coarse-grown birds. The comb being absent you could hardly say these birds were cocks.

Then, as to feeding, fowls are granivorous. This is the main reason of the delicacy of their flesh and eggs; but since Judges (at least here) give prizes only for size, the public will be suspicious and somewhat revolted when they learn how that is obtained, and that one is recommended to "do as others do, feed one's birds on horseflesh." Supposing this feeding was allowed, the difficulties of obtaining fresh horseflesh would be great, and a temptation thrown-out in many cases to have poultry fed with mere offal.

Is it fair for birds honestly fed on the best grain and meal to have to compete with birds fed on any kind of flesh? That this is the practice of breeders and exhibitors I am aware, for I have in my hands a note from one of the successful exhibitors at the Birmingham Show, saying there was no harm in using flesh (I had said horseflesh in my note to him). These shows require to be well looked after and criticised publicly, as you are aware.—Sabrina.

[We hail your letter with pleasure. We know you will believe us when we say nothing is so unpalatable as the truth. We are neither going to defend or impugn the Houdan judgments at Birmingham, but we will say without the least fear of contradiction, being importers of fifteen years' standing, that the stubs or nascent feathers on the legs are almost the rule. They never grow to feathers. Standards are excellent things, but they are prone rather to describe that which is desirable and should be, than that which can be had. The legs of Houdans should be black and white, and all were so at Birmingham; but even in the standard it is not stated which colour should predominate. As regards dark plumage, some prefer it, others like lighter. In many instances even exhibitors prefer that which they have. There are also differences in critics. We believe it is Lord Macaulay who says no historian can be impartial. We think the same of critics. We like to believe they are honest, but spite of all endeavours we cannot believe them impartial. The combs should be well developed. The Houdan is a table fowl, and should have all the properties of such a bird. It is called the French Dorking, probably from its five claws. It should have the properties of its English associate. Remove the legs, head, and tail, and it should leave a square. When the size of the top-knot is made a complaint to the exclusion of the weight that should attach to the more valuable properties, it is a mistake, and may be attributed to the desire felt by the reporter or critic to say something that may vouch for his superior knowledge of the subject. Some go to approve everything, others view all things through a yellow glass.

Your remarks as to feeding are correct. A competent judge should be capable of distinguishing between a bright healthy bird with a frame capable of carrying a top weight and willing to put it on, and another weighing from the fact of having fed on raw flesh. No question has done more harm than that of brute weight overriding properties ten times as valuable. Fowls are granivorous and should not be fed like cats.]

DORSET SHOW OF POULTRY, &c.

This was held at the Town Hall and Corn Exchange, Dorchester, on January 27th and 28th.

Poultry matters are looking-up "in the west countree." Just recently I had to chronicle a splendid success at Bristol, and now I gladly "make a note of" another success at Dorchester. The county town of Dorsetshire is no modern-looking or wide-extending place; it has no northern bustle about it; but it has a look of its own—quite its own: four avenues of trees, right ancient ones, with broad gravel drives between them, seem to run round the town, or rather the town lies in the square in the midst. All is square, all right angles, at Dorchester; the main streets, as in a kindred place, Chichester, cross each other at right angles, only there is no ancient cross as there to fill the central space. Walking from the station I enter one of the four streets, pass upward, and before me at the opposite angle is a well-built Town Hall and Corn Exchange, with pretty clock turret at the corner, quite a marked object. Here the poultry Show is held. The building might be taken for an ancient place restored, or a comparatively modern one, which indeed it is. A throng is outside of foot people, and a continuous driving-up of carriage people. The waiter at the hotel where I dined told me "he had never seen Dorchester so full for many a day, and that he had had no time to sit down as yet and eat a meal." This was said at four o'clock. I see in this that an old county town is a good place to hold a show in. People go there to shop and chat, and if the day be fine the show is a nice object for a drive. The day was indeed fine—too fine and mild, a grumbler would say, for January; but enjoy the day, say I, and leave the future. "Take the good the gods provide you," leave the rest. Elbowing my way through the crowd, admiring Dorsetshire carriages and horses, and their occupants and riders (N.B.—Dorsetshire ladies are among the best-looking in England), I enter the Corn Exchange where the poultry is exhibited. The pens were Mr. Billett's, and they were well arranged, and a good space between. This better than Bristol, where the space was rather too narrow. The place is full, and a side room, or rather end room, is also full of Ducks and Geese. Looking round generally I ascend the staircase to the Town Hall, where are the special objects of my visit—the Pigeons.

It is always agreeable, when it can be done, that the Pigeons should occupy a separate room; but, of course, this cannot always be the case. This Town Hall was perfection; pretty in itself, with its open oak roof, and the shields and coats of armour of various families filling sufficiently the walls, while the light from the windows was excellent. The prize-shown Pigeons were in rows in the centre, while a beautiful collection of Pheasants, fourteen pens, were at the end and one side. The Pheasants were Golden, Silver, Piebald, Japanese, and one pen of the splendid "Reeve's Pheasants." A well-supplied refreshment stall occupied the other side; and so suitable and pretty the room, and so good the arrangements, that I must own I never beheld a more bright-looking show. The number of pens in the Town Hall, Pigeons chiefly, was about

two hundred; that of the poultry about five hundred, making in all 720.

Pigeons.—Carrier cocks, Any colour.—First (Fulton), colour very good; Yardley second with a very down-faced bird. Pen 522, a bird of much beauty. Carrier hens.—First (Yardley), a little small, but a good-carriaged bird. Second (Fulton), a fine large hen, but spouty. Highly commended good (530); commended (528), large, but flat-wattled. Ponter cocks, Any colour.—First (Pratt), a Black-pied bird, very nice. Second (Fulton), a good Yellow, but somewhat long-cropped—oval, not globular. Ponter hens.—First-and-cup (Pratt), a Yellow, good style and gracefnl; a pity that the white extends to each eye, and the eye partly bull. Second, White (Fulton). 538 (Pratt), Black, and good, but very heavily plucked in the leg. There was much need of blocks for the Ponters, without which they cannot show properly. Tumblers, Any variety, pairs.—First (Fulton), Almonds, hen being the better. Second (Yardley), also Almonds, the cock being much the better; hen mousy. This was a pretty class, having Agates, Beards, Kites, &c. Many of the Carriers were shown in a very dirty condition, as also the Tumblers. Barbs.—First and second (Fulton). In the latter the cock was poor, in the former the hen none too good, but one good in each pen secured two prizes. Oh! wise Scotchman! Pen 553 a nice pair of Yellows. Turbits.—This was a strong class, and contained some good birds, but unfortunately the pairs were, as a rule, badly matched; thus, a point crown and a shell crown in one pen, or at least a suspicion of each; now pairs should match. First (Crafers), a good pair of Yellows. Second (Dew), good Silvers. Jacobins, Any colour.—This class was a very interesting one. First (Fulton), good Reds, one of them beautifully short-faced, and the red in both reaching quite over the thighs; indeed they are excellent. A word of praise must be specially given to the second-prize birds (Mr. J. Andrews'). Colour and shape excellent, hood and chain equally so; indeed they ran Mr. Fulton's very hard, but then the colour was not so sound and thorough on the thighs. I was glad to see so many pairs of this elegant variety of Pigeon. I should like to see more Yellows, and Blacks, and Whites, and if possible Blues. Jacobins are a fine old variety, and have, even as far back as "The Treatise," been well depicted; the portrait in that work of the Jack being better than any other of the illustrations. Fantails.—These birds were exhibited in cages much too small for their tails. They would have done well enough for single birds, but not for a pair of Fans. First-and-cup (Loversidge); second (Spencer), good Blues. Mr. Yardley's Blues not noticed, which proved how superior were the two winning pens. Nuns.—Three pens only, and very poor. Antwerps.—Long-faced and Short together. First (Yardley), Short-faced, good head-and-beak birds, and general form, Red Chequer, but poorly chequered; in fact, nearly whole red. Second (Colson), Silver Duns. 596, same owner, very good Blue Chequers. Dragoons.—Now came the Show. A finer and more numerous class was, perhaps, never seen at a small show. Their fineness is revealed at once by the names of the two chief exhibitors, Mr. Graham and Mr. Bishop. Their number is accounted for by the fact that a point cup was subscribed for Dragoons. This was won by Mr. F. Graham with thirty-five points, against Mr. Bishop with twenty-eight. I own I should like to have seen Mr. Bishop win on his own ground at Dorchestor; but, then, he does not own either a Red or a Yellow Dragoon, in which Mr. Graham is so strong. But to proceed with these splendid classes of Dragoons in due order. Dragoons (Silver).—First (Bishop). This was the Palace cup bird for 1873, and also took a Bristol cup. Second (Graham), a very beautiful bird. 608 (Bishop), a very good bird. 612, very highly commended (Bishop), a very promising bird. 609 (Bishop), a Palace cup bird, but here only highly commended. Dragoons (Blue).—First (Shuttler), I did not care for. Second (Gregory), better than first, the bars being beautiful. Dragoons (Red or Yellow).—First-and-cup (Graham). I handled this bird, and it was marvellous to see how sound and beautiful the colour, rich yellow, was even in rump and tail. The colour, no doubt, won, for the head was heavy, the neck short and thick, the lash also red, which all do not approve. In short, Mr. Graham, your bird is a most beautiful Horseman, and as such I will give it any amount of praise. Second (Graham). Highly commended, 639 (Yardley), very sound Yellow. I must say that this class was most excellent. Dragoons (White).—First (Bishop). Second (Packham). 667, very highly commended, a very beautiful bird. 678, almost a White Carrier. 669, commended, is exactly my style of Dragoon. The Dragoons were alone worth travelling a hundred miles to see. Any other Variety.—A very small class, much too small. Mr. Fulton's Trumpeters were deservedly first. A nice pair of Frillbacks were commended. A pair of Blue Priests highly commended. There was also a Selling class, but if an exhibition can live and thrive without this class, it would surely be right that our eyes should be spared the sight of such a ragged regiment. In addition, a number of inferior birds are scattered over the country.

I have spoken of the *Pheasants*, they added considerably to the beauty of the Show. Indeed, what with the excellency, as a rule, of the birds exhibited, tho prettiness of the place of exhibition, the good taste shown, and to crown all, a crowd of visitors, I shall remember Dorchester Pigeon Show as one of the pleasantest I have ever seen. Mr. Allsop of Birmingham was the Judge, and as always, he judged well.—Wiltshire Rector.

Dorkings.—*Coloured.*—1 and Cup, W. Whitworth, jun., Manchester. 2, H. Lingwood, Needham Market. 3, F. Cawa, Southampton. *hc*, F. Cawa; Rev. H. Hamilton, Chard. *c*, C. Ogilvie, Hambledon.

Dorkings.—*Silver-Grey.*—1, L. Wren, Lowestoft. 2, T. Moore, Yeovil. 3, Miss B. Neville, Glastonbury.

Dorkings.—*White.*—1, 2, 3, and *c*, Mrs. M. A. Hayne, Dorchester.

Brahmas.—*Dark.*—1 and Cup, T. F. Ansdell, Cowley Mount, St. Helens. 2, W. H. Crabtree, Leveoshulme. 3, Newnham & Manby, Wolverhampton. *hc*, J. Watts, King's Heath, Birmingham (2); J. Evans, Bristol. *c*, Mrs. M. A. Hayne; W. T. Boden, Ringmore; F. L. Turner.

Brahmas.—*Light.*—1 and Cup, Mrs. T. Turner, Ringwood. 2, T. A. Dean, Marden, Hereford. 3, W. H. Crabtree. *hc*, Rev. G. Watson, Lympstone, Exeter; T. A. Dean; J. Bloodworth, Cheltenham. *c*, Mrs. T. Turner; P. Haines, Palgrave, Diss.

Cochins.—*Cinnamon and Buff.*—1 and Cup, S. R. Harris, Cusgarne, St. Day. 2, Capt. T. S. Robin, Jersey. 3, H. Tomlinson, Gravelly Hill, Birmingham. *vhc*, Henry Lingwood; J. K. Fowler, Aylesbury. *hc*, C. Taylor, Gloucester. *c*, J. Cattell, Birmingham; A. Martin, Dorchester.

Cochins.—*Partridge.*—1, G. Lias, Par Station. 2, J. K. Fowler. 3, W. H. Crabtree. *c*, H. Moore, Tiverton.

Cochins.—*Any other variety.*—1, J. Turner, Bath. 2, J. K. Fowler *hc*, Mrs. J. T. Holmes, Bath.

Spanish.—1 and Cup, J. Boulton, Bristol. 2, P. F. Le Sueur, Jersey. 3, Miss E. Browne, Chard. *hc*, E. Steele, Dorchester (2); J. Rodbard, Wrington, Bristol.

Game.—*Black-breasted Red.*—1, W. J. Pope, Biggleswade. 2, J. Mason, Worcester. 3, W. H. Stagg, Amesbury. *c*, F. A. Symes, Dorchester; E. G. Farquharson, Blandford; H. Bevise, Dorchester.

Game.—*Brown-breasted Red.*—1 and Cup, J. Jekin, Eltham. 2 and 3, H. Browne, St. Austell. *hc*, Westacott & Joint, Barnstaple; T. Mason, Lancaster; H. E. Martin, Fakenham. *c*, E. C. Pope, Falmouth.

Game.—*Any other variety.*—1 and 3, E. G. Farquharsen. 2, J. Mason. *hc*, H. Browne. *c*, W. J. Thomas, Brecon.

Hamburghs.—*Gold-pencilled.*—1 and Cup, W. K. Tickner, Ipswich. 2, S. Elliott, jun., Liskeard. 3, J. Long, Bromley. *hc*, G. Packham, Exeter.

Hamburghs.—*Silver-pencilled.*—1, H. Feast, Swansea. 2, J. Long. 3, N. Barter, Plymouth.

Hamburghs.—*Gold-spangled.*—1 and Cup, T. Blakeman, Wolverhampton. 2, W. A. Hyde, Ashton-under-Lyne. 3, T. Dean, Keighley. *c*, Mrs. J. Pattison, Dorchester; J. Carr, Swansea; J. Long.

Hamburghs.—*Silver-spangled.*—1, Miss E. Browne. 2, J. Long. 3, Mrs. J. Pattison.

Polands.—1, J. Hinton, Warminster. 2, G. Lias. 3, T. P. Edwards, Lyndhurst. *vhc*, T. Dean; T. P. Edwards.

Malays.—1, S. B. Perry, Lymington. 2, Rev. N. J. Ridley, Hollington House, Newbury. 3, E. Branford, Swaffham. *hc*, J. Hinton; Westacott & Joint. *c*, Capt. C. F. Terry, Reading.

Houdans.—1, W. Dring, Faversham. 2, W. Whitworth, jun. 3, F. Lake, Sittingbourne. *c*, Rev. E. Handley, Glastonbury.

French.—*Any other variety.*—1 and 3, W. H. Crabtree (Crêve-Cœurs). 2, Rev. N. J. Ridley (La Flèche). *hc*, W. Dring (Crève-Cœurs); G. De Faye, Jersey (La Flèche).

Any other Variety.—1, S. R. Harris (Indian Game). 2, R. S. S. Woodgate, Tunbridge Wells (Silkies). 3, R. H Luckham, Dorchester (White Spanish). *vhc*, R. R Fowler, Aylesbury; J. Long *hc*, W. Wildey, Cosham; J. Isard, Wokingham (Dorkings); Mrs. J. T. Holmes (Silkies). *c*, A. Ward, Wimpole Street, London.

Game Bantams.—*Black-breasted Red.*—1 and Cup, G. Hall, Kendal. 2, P. F. Le Sueur. 3, T. W. Anns, Clapham. *c*, Mrs. E. Farquharson, Blandford; Allen & Osborne, Plymouth; T. Hardy, Dorchester; Wingfield & Andrews, Worcester.

Game Bantams.—*Brown-breasted Red.*—1, S. & J. J. Stephens, Stroud. 2, J. Long. 3, T. R. Charles, Weymouth.

Game Bantams.—*Any other variety.*—1, G. Hall. 2, R. Brownlie, Kirkcaldy. 3, P. F. Le Sueur.

Bantams.—*Gold and Silver-laced.*—1, Miss M. J. Tonkin, Bristol. 2, C. H. Poole, Bridgwater. 3, Mrs. E. Pritchard, Wolverhampton. *hc*, S. Elliott, jun.; C. H. Poole.

Bantams.—*Any other variety.*—1, R H Ashton, Mottram. 2, W. H. Shackleton, Bradford. 3, R. S. S. Woodgate. *hc*, Wingfield & Andrews. *c*, Mrs. Hambro, Blandford; J. Watts.

Selling Class.—1, H. Browne. 2, Mrs. J. Pattison. 3, F. L. Turner, Dorchester. 4, T. Moore. 5, Miss E. Browne. *hc*, E. D. Sweet, Lymington; Mrs. Hayne; E. Steele (2); H. Yardley, Birmingham. *c*, R. H. Luckham; T. Moore; B. Hogg, Dorchester (3); Bellingham & Gill, Burnley; M. H. Start, Pewsey; J. Turner; J. K. Fowler.

Selling Class.—*Hens.*—1, J. N. Whitehead, Bridgewater. 2, Mrs. Martyn, Blandford. 3, Mrs. J. Pattison. 4, J. Hinton. 5, T. P. Edwards. *hc*, T. Moore; R. Gower, Wareham; E. Steele; Mrs. J. Pattison (2); J. N. Whitehead; T. Southerden, Bristol; A. Martin. *c*, Mrs. N. Grenville; N. Benjafield, Shaftesbury; Mrs. C. Radclyffe, Warnham; E. D. Sweet; Mrs. J. Pattison (2); P. Ogilvie; J. Chisman, Southampton; S. W. Thomas, Skithy; J. Watts.

Ducks.—*Aylesbury.*—1 and Cup, J. K. Fowler. 2 and 3, J. Hedges, Aylesbury.

Ducks.—*Rouen.*—1 and 2, Rev. E. Handley. 3, J. K. Fowler.

Ducks.—*Black East Indian.*—1, S. Burn, Whitby. 2 and 3, G. S. Sainsbury, Devizes. *hc*, G. S. Sainsbury; W. H. Stagg. *c*, J. W. Kelleway, Isle of Wight.

Ducks.—*Any other variety.*—1 and 2, Sir W. Marriott, Blandford. 3, J. K. Fowler. *hc*, W. Boutcher, Notting Hill, W.; Capt. C. F. Terry; R. Wilkinson, Guildford; C. H. Mayo, Dorchester (2); Sir W Marriott (2).

Ducks.—*Selling Class.*—1, J. Hedges. 2, E. Ponting, Cerne. 3, Mrs. C. Radclyffe. *c*, Mrs. Martyn (2); J. H. Hoit, St. Austell.

Turkeys.—1, Rev. N. J. Ridley. 2, E. Ponting. 3, A. Martin. *hc* and *c*, Mrs. W. Hull, Dorchester.

Geese.—1, J. K. Fowler. 2, Mrs. C. Radclyffe. 3, J. O. Riggs, Dorchester. *c*, W. H. Dunman, jun., Dorchester; Rev. E. Handley.

Pheasants.—1 and 2, C. H. Mayo. 3 and *vhc*, Mrs. T. Turner. *hc*, Lady Heathcote; C. H. Mayo (4).

PIGEONS.

Carriers.—1 and Cup, R. Fulton, London. 2, H. Yardley. *hc*, R. Fulton. *c*, G. Kempton, Packington Street, London, N. *Hens.*—1, H. Yardley. 2 and *hc*, R. Fulton. *c*, G. Kempton.

Pouters.—*Cocks.*—1 and *hc*, H. Pratt, Hampton-in-Arden. 2, R. Fulton. *c*, P. R. Spencer, Hereford. *Hens.*—1 and Cup, H. Pratt. 2 and *hc*, R. Fulton.

Tumblers.—1, Cup, and *hc*, R. Fulton. 2 and *vhc*, H. Yardley. *c*, W. B. Mappleheck, jun., Mayfield, Moseley.

Barbs.—1 and 2, R. Fulton. *hc* and *c*, H. Yardley.

Turbits.—1, C. A. Crafer, Wallington. 2, E. T. Dew, Weston-super-Mare. *hc*, G. Packham; C. W. Washbourne, Gloucester. *c*, Master J. Wainwright, Shipton Mallet; R. Fulton.

Jacobins.—1 and *vhc*, R. Fulton. 2, J. Andrews, Poole. *hc*, J. Andrews; H. Yardley. *c*, J. Andrews; W. Bishop, Dorchester.

Fantails.—1, Cup, and *hc*, J. F. Loversidge, Newark. 2, P. R. Spencer. *c*, W. Morris, West Bank, Ross.

Nuns.—1, G. Packham. 2, J. P. Mills, Exeter.

ANTWERPS.—1, H. Yardley. 2, G. Colson, Heavitree, Exeter. *hc*, W. B. Mapplebeck, jun. *c*, J. Andrews.

DRAGOONS.—*Silver.*—1, W. Bishop. 2, F. Graham, Birkenhead. *vhc*, F. Graham (2); W. Bishop. *hc*, F. & E. Osmond, Dorchester (2); W. Bishop. *c*, H. Yardley; W. Bishop.

DRAGOONS.—*Blue.*—1, R. Shuttler, Poole. 2, G. H. Gregory, Taunton. *vhc*, F. Graham; W. Bishop. *hc*, A. Boote, Crewe; F. Graham (2). *c*, H. Yardley; G. Packham; F. Graham; W. Bishop.

DRAGOONS.—*Red or Yellow.*—1, Cup, and 2, F. Graham. *vhc*, J. Edelsten, Waltham Cross; F. Graham. *hc*, H. Yardley; F. Graham. *c*, R. Shutler; G. H. Gregory; F. Graham.

DRAGOONS.—*White.*—1, *vhc*, and *c*, W. Bishop. 2, G. Packham. *hc*, F. Graham; W. Bishop.

DRAGOONS.—Point Cup, F. Graham.

ANY OTHER VARIETY.—1, R. Fulton. 2, H. Yardley. *hc*, G. Packham; R. Wilkinson, Guildford. *c*, O. C. Farrer, Binegar Hall, Warham.

SELLING CLASS.—1, J. H. Watkins, Hereford. 2, J. Andrew. *vhc*, W. Morris. *hc*, J. Andrews; Miss Dickinson, Somerton. *c*, O. C. Farrer; H. Yardley.

JUDGES.—*Poultry:* Rev. G. F. Hodgson, North Petherton, Bridgewater; Mr. E. Hewitt, Sparkbrook, Birmingham. *Pigeons:* Mr. H. Allsop, Spencer Street, Birmingham.

EXHIBITION COOP.

THIS coop was invented by Mr. James Shepard, and is termed by him "Shepard's Collapsible Coop." The top and bottom are drawer-shaped, and are held apart when expanded (as shown in fig. 28) by four removable posts. The two sides and back are

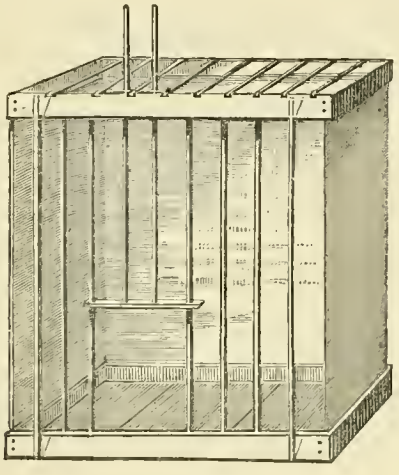


Fig. 28.

of cloth permanently secured to the top and bottom. The rear posts are on the outside of the cloth, so that there are three smooth cloth walls against which it is impossible to injure a feather. The posts are keyed-in by dove-tailed wedges, which hold the parts very rigidly together. For packing, the four posts and the rounds in front are withdrawn and packed inside the bottom, when the cloth sides are folded inwards with a bellows fold, and the top and bottom collapse as shown in fig. 29. This coop was used by the Central Connecticut and

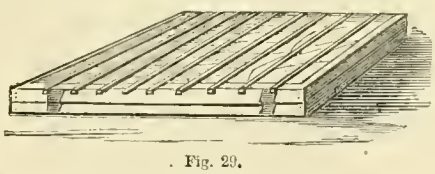


Fig. 29.

Connecticut State Societies at their late exhibitions at Bristol and Hartford, Connecticut, and was received with great favour. Although designed for exhibition purposes only, some of the exhibitors used it for transporting their birds to and from the exhibition.—(*American Fancier's Journal.*)

JERSEY EXHIBITION OF POULTRY, &c.

THIS was held in the new Vegetable Market, Beresford Street, January 20th and 21st.

DORKINGS.—*Cock or Cockerel.*—1, J. Downing. 2, Major H. Howell. *Hen or Pullet.*—1 and 2, S. Le Riche.

SPANISH.—*Cock or Cockerel.*—1 and 2, P. F. Le Sueur. 3, T. De Faye. *Hen or Pullet.*—Cup and 2, P. F. Le Sueur.

ANDALUSIANS AND MINORCAS.—*Cock or Cockerel.*—1, P. J. De Carteret. 2, J. H. Robin. *Hen or Pullet.*—1 and 2, P. Gallichan.

COCHINS.—*Cinnamon or Buff.*—*Cock.*—1, P. Gallichan. 2, —Le Feuvre. *Hen.*—1, Capt. T. S. Robin. 2, P. Gallichan. *Cockerel.*—1 and 2, Capt. T. S. Robin. *Pullet*—Cup and 2, Capt. T. S. Robin.

COCHINS.—*Any other variety.*—*Cock.*—1 and 2, Capt. T. S. Robin. *Hen.*—1 and 2, Capt. T. S. Robin. *Cockerel.*—1, J. Downing. 2, Capt. T. S. Robin. *Pullet.*—1, Capt. T. S. Robin. 2, J. Downing.

BRAHMAS.—*Light.*—*Cock.*—1, Capt. T. S. Robin. 2, P. J. De Carteret. *Hen*—1, P. J. De Carteret. 2, Capt. T. S. Robin. *Cockerel.*—1, Rev. J. Le Sueur. 2, J. Le Rossignol. *Pullet.*—1 and 2, Rev. J. Le Sueur.

BRAHMAS.—*Dark.*—*Cock.*—1, P. Gallichan. 2, Capt. T. S. Robin. *Hen.*—Cup, P. Gallichan. 2, E. Messervy. *Cockerel.*—1, P. F. Le Sueur. 2, Capt. T. S. Robin. *Pullet.*—1, P. J. De Carteret. 2, P. Gallichan.

HOUDANS.—*Cock or Cockerel.*—1, G. De Faye. 2 and 3, Capt. T. S. Robin. *Hen or Pullet.*—1 and 3, Capt. T. S. Robin. 2, P. J. De Carteret.

FRENCH BREEDS.—*Any other variety.*—*Cock or Cockerel.*—Cup, G. De Faye. 2, J. Eraut, jun. 3, P. J. De Carteret. *Hen or Pullet.*—1, P. J. De Carteret. 2 and 3, G. De Faye.

GAME.—*Black and other Reds.*—*Cock or Cockerel.*—Two Cups, 2, and 3, J. Voisin. *Hen or Pullet.*—1 and 2, J. Voisin. 3, F. G. Bertram.

GAME.—*Any other variety.*—*Cock or Cockerel.*—1 and 3, J. G. Falle. 2, J. Voisin. *Hen or Pullet.*—1, J. Voisin. 2, J. A. Ozouf. 3, P. Rideout.

HAMBURGHS.—*Spangled.*—*Cock or Cockerel.*—1 and 3, G. De Faye. 2, C. Nicolle. *Hen or Pullet*—1 and 3, G. De Faye. 2, C. Nicolle.

HAMBURGHS.—*Pencilled.*—*Cock or Cockerel.*—Cup, J. A. Carrè. 2, R. R. Lempriere. 3, J. Arthur. *Hen or Pullet.*—1, J. A. Carrè. 2, R. R. Lempriere. 3, G. R. Boydell.

MALAYS.—*Cock or Cockerel.*—Cup and 2, J. G. Falle. 3, J. Downing. *Hen or Pullet.*—1 and 2, J. G. Falle. 3, J. Downing.

POLISH.—*Cock or Cockerel.*—1, P. J. De Carteret. 2, A. Gallichan. *Hen or Pullet.*—1, P. J. De Carteret. 2, A. Gallichan.

ANY OTHER VARIETY.—*Cock or Cockerel.*—Cup, J. A. Ozouf (Black Hamburgh).

SELLING CLASS.—*Cock or Cockerel.*—1 and 2, P. F. Le Sueur (Spanish). 3, G. De Faye (La Fleche). 4, P. Gallichan (Light Brahma). *Hen or Pullet.*—1, P. F. Le Sueur (Spanish); J. Smith (Black Red Game). 2, P. F. Le Sueur (Spanish). 3, Capt. T. S. Robin (Dark Brahma). 4, P. Gallichan (Light Brahma).

CROSS BREEDS.—1, Major H. Howell (Brahma and Dorking).

HEAVIEST BIRDS.—1, Capt. T. S. Robin. 2, T. De Faye.

GAME BANTAMS.—*Black and other Reds.*—Cup and 2, P. F. Le Sueur. *Any other variety.*—1, P. F. Le Sueur. 2, F. R. Le Brun.

BANTAMS.—*Any other variety.*—1, J. A. Ozouf. 2, J. Cabot.

TURKEYS.—1, W. C. Gray. 2, N. Poingdestre.

GEESE.—1, P. Le Quesne. 2, J. A. Ozouf.

DUCKS.—1, P. F. Le Sueur. 2, P. Le Quesne.

EXTRA CLASSES.—*Peacocks.*—Extra prize, P. J. De Carteret. *Pheasants.*—1 and Extra 1, W. C. Gray. 2, P. J. De Carteret.

PIGEONS.—Cup, J. Le Rossignal. 2, H. Beyes. 3 and 6, J. A. Ozouf. 4, W. C. Gray. 5, F. G. Bertram.

RABBITS.—1, Dr. C. A. Godfray. 2, T. De Faye. 3, G. R. Boydell.

CATS.—1, C. Prince. 2, — Moignard. 3, A. Swanger.

PORTSMOUTH SHOW OF POULTRY, &c.

THIS Show was held in the Landport Volunteer Drill Shed on the 29th and 30th of January, and on the 1st of February; and as it is the second held in the same place within seven weeks the Portsmouth folks seemed determined to give fanciers plenty of opportunities of showing off their specimens. "Comparisons are odious," and we will not attempt to compare one Show with the other, and will only add that we hope the Committee another year will be a little quicker in putting up the prize cards, as when we left at four o'clock many of the awards were not known, though all the Judges had finished by two o'clock, and most of them long before. Dinners to the Judges are doubtless very commendable, but are not the public who pay their half-crowns also entitled to a little attention from the Committee? A poultry show is doubtless looked upon as a holiday, but the secretaries and committeemen who accept these offices have duties to perform to the public as well as to their insides. With this exception the management was fairly good. The poultry and Pigeons made 360 entries in all.

Game came first and formed three large classes, the cup going to a stylish pair belonging to a Jersey exhibitor; there were two or three other particularly rakish pens, but the Black Reds certainly carried off the palm. Pen 30 (Matthews) was not up to this exhibitor's usual form, the hen being heavy in body, and the cock with one light-coloured eye; they were put in at ten guineas, so doubtless meant to sell. Buff *Cochins* very good, the cup going to a large pair, rich in colour and good in shape. Mr. Tomlinson's pen was empty. The first-prize White Cochins must have run very hard for the cup; the cock's colour was simply superb, and it is no exaggeration to say that the pair were as white as the driven snow. Black Cochins were second, good as Blacks go, but certainly not equal to the third-prize Partridge, or to pen 48, Partridge. Each variety of *Brahmas* had two classes, one for old and the other for young birds: far better would it have been to have divided them into single birds, as it is ridiculous to talk about birds as chickens when they may be thirteen months old. The majority of the birds were certainly not good, Mr. Lingwood's birds standing out so far from the remainder, except in the class for Lights under a year, that it is no injustice to the Judge to say a beginner could have picked them out. Old Dark Brahmas were a poor class; the third pen quite as good as the second, and several hens in this class of a dirty brown colour. The young birds were a good deal better though, and a nice class. Light Brahmas, old birds, only brought together five entries, though a cup was offered. The hen in the cup pen was of a very good shape and colour, but destitute of toe nails, and with a diseased ear. The second-prize pen contained a very nicely-shaped cock with a good comb, and altogether the best cock in the class, but his hen not large enough. Young Light Brahmas were a very good class, this being the only case in which Mr. Lingwood met an opponent worthy of his metal. Pen 85 (Rice), which was third, contained a splendid cockerel, which looked very much like the Palace

winner, and mated with a first-rate pullet; the second-prize pen was also good all round. The first and second-prize *Dorkings* were both very good, Mr. Lingwood's pen containing his third-prize Palace cock mated with a large and dark hen. The second cock dark and good, but the pen spoilt by the hen having a bad "bumble" foot. The third cock rather too long in the leg. *Spanish.*—Mr. Le Sueur's was the only really good pen, and won easily; the hen's face of a beautiful texture, the cock, too, capital in face and comb. The cocks in the other pens looked as if they would have been glad of a little more daylight. *Hamburghs* were good classes. This breed is certainly looking up in the south. A splendid pen of Gold-pencils were easily first. In the next class Gold-spangles were first, and Silvers second and third. *Polands*, a small class but good. First to Golds, second to White-crested Blacks; third to Silvers. This was a very level class. In the *French* class an unaccountable mistake occurred, the third prize being given to Malays, which were entered by mistake instead of in the next class, the Variety class, in which several first-rate Malays were unnoticed. First going to Black Hamburghs; second to White Leghorns with very yellow ear-lobes; third to Andalusians. In Black *Bantams* there were only two pens. Silver Sebrights were first in Variety Bantams, while Duckwing and Pile Game Bantams were second and third.

Ducks fared badly, as all varieties competed together. First and third prizes to Ronens, second to East Indian. Some very handsome pens of Gold and Silver *Pheasants* attracted much attention.

PIGEONS.—Eleven classes of Pigeons only brought together fifty pens. Mr. Esquilant must have had quite a little holiday. *Carriers* were by far the best classes, the cup going to a magnificent hen. The Rev. Mr. Hodson's Blue *Dragoons*, which have been so successful lately, again came to the front, "walking in." *Tumblers* poor. *Fantails* good, especially the first-prize pair, which looked rather fresh. In *Jacobins*, first prize went to good Reds; the second prize withheld. In the Variety class first prize was justly awarded to Mr. Ivimy's Barbs. Carriers and Fantails were first and second in the Selling class.

RABBITS.—The Rabbits formed a capital show, but the classes were not well arranged. Instead of the first class for length of ear it would have been better to have had a class for the best all-property Rabbit, as when the prizes are solely for length of ear, they are a foregone conclusion. Messrs. Loveband's first-prize doe is long in ear (23⅝ inches), but rather narrow. Mr. Tomlinson's doe is ruined by having a piece pulled off the end of her ear. Several splendid Rabbits competed in the other classes—notably pen 455 (King), a Yellow-and-white doe, good all round, and pen 465, Mr. Vallom's Black doe; pen 467, a very good Belgian Hare, but too white in the nose. Mr. Greaves exhibited an exceedingly pretty Dutch doe.

GAME.—*Black-breasted Reds.*—Cup, J. Voisin, Jersey. 2 and 3, J. Carver, Tillington. *hc*, T. Faulkner, jun.; — Mason *c*, M. Sandford; W. H. Stagg. *Brown-breasted Reds.*—1, J. T. Brown, St. Austell. 2, W. Adams, Ipswich. 3, E. Winwood, Worcester. *hc*, J. Voisin. *c*, F. Warde. *Any other variety.*—1, J. Beattie, Southsea. 2, — Winwood. 3, J. Voisin. *hc*, T. Ratcliffe. *c*, J. T. Brown; H. Gibson.

COCHINS.—*Buff and Cinnamon.*—Cup, S. R. Harris, Cusgarne. 2, W. White, Canterbury. 3, Capt. T. S. Robin, Jersey. *hc*, R. Crabb; H. Feast; W. White, Canterbury; — Winwood. *Any other variety.*—1, R. S. S. Woodgate, Pembury. 2, H. Gibson, Brockenhurst. 3, J. Sleep, Islington, London. *hc*, C. H. Matthews; T. Derry; Capt. Trannois; Mrs. Brassey; Rev. A. Warde. *c*, Rev. C. Locke; W. Barker.

BRAHMA POOTRAS.—*Dark.*—Cup, Horace Lingwood, Creeting, Needham Market. 2, H. Feast, Swansea. 3, Mrs. Brassey, Battle. *hc*, Mrs. Neale; G. Gladwin. *c*, — Westcott *Chickens*—Cup, Horace Lingwood. 2, P. F. Le Sueur, Jersey. 3, Mrs. Brassey. *hc*, A. Cosens; R. Crabb (2); — Hammond.

BRAHMA POOTRAS.—*Light.*—Cup, A. Boissier, Penshurst. 2, J. Bradshaw, Cranleigh. 3, Rev. N. J. Ridley, Newbury. *hc*, Mrs. Brassey. *Chickens.*—Cup, Horace Lingwood. 2, Mrs. W. Drummond, Bath. 3, Rev. J. M. Rice, Bramber Rectory. *hc*, — Raynor. *c*, — Monckton.

DORKINGS.—Cup, Henry Lingwood, Barking. 2, Viscount Turnour, Shillinglee Park. 3, — Humphrey, Ashington. *hc*, — Humphrey; B. H. Greenhill (2).

SPANISH.—1, J. H. F. Le Sueur. 2, J. T. Parker, Northampton. *hc*, Mrs. Brassey; H. Brown.

HAMBURGHS.—*Gold or Silver-pencilled.*—1, — Tickner, Ipswich. 2, T. Faulkner, jun., Merston, Isle of Wight. 3, J. Long, Bromley Common. *hc*, Master E. Moore; T. Faulkner, jun. (2); H. Feast; J. Long. *c*, G. Packham. *Gold or Silver-spangled*—1, — Tickner. 2 and 3, J. Long. *c*, Mrs. Barnard.

POLANDS.—1, E. J. Reaves, Haywoods Heath. 2, T. P. Edwards, Lyndhurst. 3, J. Hinton, Warminster. *hc*, G. J. Lenny.

FRENCH.—Cup, W. Dring, Faversham. 2, M. Sturt, Pewsey. 3, S. B. Perry, Lymington. *hc*, M. Sturt; — Waters; A. Boissier; H. Feast; Rev. G. Chilton. *c*, Rev. C. Lock; R. J. Knight.

ANY OTHER VARIETY.—Cup, H. Feast. 2, Rev. C. Lock, Whitewell. 3, W. Wildey, Cosham. *hc*, E. J. King; J. Long; A. C. Croad. *c*, J. H. Puleston; W. West.

GAME BANTAMS.—*Black Red.*—1 and 2, W. Adams. 3, Wingfield & Andrews, Sudbury. *hc*, E. Payne; J. Long; W. Boutcher. *c*, Miss M. A. Vace. *Brown Red*—1 and 2, — Banker, Bromley. 3, S. & J. Stephens, Ebley.

BANTAMS.—*Black.*—1, R. H. Ashton, Mottram. 2, W. White. *Any other variety.*—Cup, M. Leno, Dunstable. 2, E. Payne, Cardiff. 3, P. F. Le Sueur. *hc*, M. Leno; G. Holloway.

DUCKS.—Cup, Mrs. Brassey. 2, J. W. Kelleway, Merston, Isle of Wight. 3, J. Gill, Winchester. *hc*, R. Wilkinson.

SELLING CLASS.—*Pair.*—Cup, Mrs. M. J. Passby (Brahmas). 2, Capt. T. S. Robin (Partridge Cochins). 3 C. Cork (Dorkings). Extra 3, H. Brown (Spanish). *hc*, Master M. V. Sandford (Houdans); — Whitehead (White Cochins); Capt. T. S. Robin (White Cochins); F. Rayner (Light Brahmas); — Humphrey (Dorkings); — Locke (Dorkings); T. W. Anns (Partridge Cochins); W. Ford (Spanish); J. R. Way (Dark Brahmas); J. Chisman (Light (Brahmas); J. Bradshaw (Light Brahmas); G. W. Pelter (Brahmas); T. P. Edwards (Polands); W. W. Pyne; T. Sheen (Spanish); F. Warde (Game); — Rummery (Dark Brahmas). *c*, Capt. T. S. Robin (Dark Brahmas); R. Bird (Light Brahmas); Rev. N. J. Ridley (Light Brahmas); J. Hardman (Dark Brahmas); G. W. Pelter (Brahmas).

SELLING CLASS.—*Cock or Cockerel.*—Cup, — Winwood. 2, S. Martin (Dark Brahmas). S, H. Tomlinson (Light Brahmas). *hc*, H. Sturt (Crêve-Cœur); Capt T. S. Robin (Light Brahmas); J. W. Anns (Partridge Cochin); H. S. Fraser (Coloured Dorking); W. H. Stagg (Black Red Game); J. T. Browne (Brown Red Game); B. Hill (Dark Brahmas); J. R. Way (Buff Cochin); Capt. Trannois (White Cochin); G. W. Pelter (Brahmas); T. Sheen (Spanish); F. Ward (Game). *c*, Mrs. Braithwaite (Dark Brahmas); F. Rayner (Light Brahmas); W. H. Stagg (Black Red Game); B. Hill (Dark Brahmas).

SELLING CLASS.—*Hens or Pullets.*—Cup, C. Cork, New Shoreham (Dorkings). *hc*, — Humphreys (Dorkings); W. Ford (Cochins); J. O. Hodges (Coloured Dorkings); T. Critchel (Game). *c*, H. D. Hoare (Light Brahmas); — Monckton (Light Brahmas); J. Long.

PHEASANTS.—1, Mrs. Brassey. 2, J. Collier, Northampton. *hc*, J. Collier; W. Boots; Mrs. Brassey.

EXTRA STOCK.—*hc*, — Sterne (White Bantams); — Wise (Buff Cochin); G. Richards (Chinese Geese). *c*, — Wise (Silver-spangled Hamburgh).

PIGEONS.

POUTERS.—*Cock.*—1 and 2, Mrs. Ladd, Calne. *hc*, G. Holloway, jun. *Hen.*—1 and 2, Mrs. Ladd.

CARRIERS.—*Cock.*—1, J. H. Ivimy, Ecclesfield. 2, Mrs. Carter, Farnham. *vhc*, H. Jacob. *Hen.*—Cup, J. H. Ivimy, Sandown, Isle of Wight. 2 and *hc*, H. Jacob. *vhc*, Mrs. Carter.

DRAGOONS.—1, Rev. G. F. Hodson, North Petherton. 2, H. Jacob.

TUMBLERS.—1 and 2, A. W. Pearce, Postwood.

FANTAILS.—1, O. E. Cresswell, Early Wood, Bagshot. 2, J. F. Loversidge, Newark.

JACOBINS.—1, O. E. Cresswell.

ANTWERPS.—1, W. B. Mapplebeck, jun., Mayfield. 2, C. L. Bryce, Havant.

ANY OTHER VARIETY.—1, J. H. Ivimy. 2, J. Woods, Sandown. *hc*, T. Randall; W. B. Mapplebeck, jun.; R. Wilkinson.

SELLING CLASS.—1, G. Packham, Exeter. 2, J. F. Loversidge. *vhc*, H. Jacob. *hc*, C. Cork; Miss M. A. Vace; — Durrant.

CANARIES.

NORWICH.—*Clear Yellow.*—1 and *vhc*, J. Athersuch & Son, Coventry. 2, J. Caplin, Canterbury. *hc*, T. Willsher.

NORWICH.—*Evenly-marked or Yellow Variegated.*—1 and *hc*, J. Athersuch and Son. 2, J. Caplin. *vhc*, — Willsher. *Evenly-marked or Buff Variegated.*—1 and *hc*, J. Athersuch & Son. 2, J. Caplin.

BELGIAN.—*Clear Yellow.*—1 and 2, T. Moore, Fareham. *Clear Buff.*—1, T. Moore. *Evenly-marked or Yellow Variegated, or Evenly-marked or Buff Variegated.*—1, T. Moore. 2, W. Bickell, Laudport.

LIZARDS.—*Gold or Silver-spangled.*—1, J. Athersuch & Son.

ANY OTHER VARIETY.—1, J. Athersuch & Son. 2, W. Radmore, Plymouth (Yellow-crested Norwich). *hc*, J. Athersuch & Son; — Nicolson. *c*, G. Beghurst.

MULE.—1, J. Caplin. 2, T. Willsher, Chichester.

BRITISH AND FOREIGN BIRDS.

BULLFINCH.—1, Fellingham & Wingfield, Brighton. 2, Howard & Cleaver, Wellingborough. *vhc* and *hc*, T. Willsher. *c*, O. Nicholson, Portsmouth; Mrs. W. C. Drummond.

GOLDFINCH.—1, T. Willsher. 2, Howard & Cleaver. *vhc*, O. Nicholson (2); Mrs. W. C. Drummond.

SKYLARK.—1, H. C. Furner, Emsworth. *vhc*, T. Willsher.

SISKIN, REDPOLE, OR LINNET.—1, Fellingham & Wingfield. *vhc*, T. Willsher. *hc*, T. Willsher; Mrs. W. C. Drummond.

BLACKBIRD OR THRUSH.—1, H. Noble, Portsmouth. *vhc*, G. Sparks; H. Noble; Mrs. W. C. Drummond. *hc*, — Simmons.

BRITISH BIRDS.—*Any other variety.*—1, Howard & Cleaver (Starling). 2, Mrs. W. C. Drummond (Yellowhammer). *vhc* and *hc*, — Simmons (Woodlarks). *c*, T. Willsher (Mountain Finch).

BRITISH BIRDS.—*Group in one Cage.*—Equal Prize, — Willsher; Miss M. Case.

FOREIGN BIRDS.—*Any variety.*—1, O. Nicholson (Purple-headed Glossy Starling). 2, Capt. G. A. Gray, Aldwich (Macaw). *vhc*, Mrs. E. Popham (Large Lemon-crested White Cockatoo); G. Bevis (King Parrot); O. Nicholson (Madagascar Bishop); Mrs. W. C. Drummond (Virginian Nightingale and White Java Sparrows). *hc*, Col. Elliott (Scarlet Macaw); — Crother (Green Paroquet); Capt. G. A. Gray (Macaw); O. Nicholson (Waxbills and Budgregars).

SELLING CLASS.—*Any variety of Canary or Mule, or British or Foreign Cage Birds.*—1, J. Caplin (Norwich Canary). 2, O. Nicholson (Madagascar Bishop).

RABBITS.

LENGTH OF EAR.—1, Loveband & Quick, Edgware Road, London.

BLACK-AND-WHITE AND BLUE-AND-WHITE.—1, B. Greaves, Grimsby. 2, H. Vallom, Plumstead. *vhc*, Mrs. M. E. Shelley; Loveband & Quick.

GREY-AND-WHITE AND YELLOW-AND-WHITE.—1, W. J. King, Islington, London. 2, H. W. Simmons. *vhc*, Loveband & Quick; E. Frost. *hc*, Loveband & Quick. *c*, W. J. King.

SELF-COLOURED.—1, H. Vallom. 2, E. Frost. *vhc*, Loveband & Quick. *c*, H. W. Simmons; Loveband & Quick.

FOREIGN.—1, B. Greaves (Dutch). 2, W. Lowman (Belgian Hare). *vhc*, Loveland & Quick (Silver-Grey).

SELLING CLASS.—1, E. Frost, Hackbridge. 2 and *vhc*, H. W. Simmons. *hc*, H. W. Simmons; — Westcot. *c*, H. W. Simmons; Loveband & Quick.

JUDGES.—*Poultry:* Mr. W. B. Jeffries; *Pigeons:* Mr. F. Esquilant and Mr. S. Harding; *Cage Birds:* Mr. A. Willmore; *Rabbits:* Mr. W. Heath.

WAVERLEY SHOW OF POULTRY, &c.

THE eighth Exhibition of the Waverley Society was held in the Corn Exchange at Melrose on the 27th and 28th ult., when the entries were far more extensive than those of several years back, and the quality such as was never before seen under this roof, most of the classes containing few birds except the champions of previous shows. The birds were well arranged and attended with great care.

Dorkings, which may almost be termed the figure-head of the Scotch poultry fancy, were unusually good, almost all being noticed. In old birds first was a massive pen of Silver-Greys, and second Dark Greys; but in young birds Dark Greys were first-and-cup, and second Silver-Greys. There were some good birds in *Cochins*, but with the exception of first not one well-matched pen, the second being the Belfast winning cock and a poor pullet; both pens were Buffs. *Brahmas* were a good class, the first being won by old and second by young birds, the two very highly commended pens running very close with the winners. *Game* were one of the best classes we have seen this season, to be mentioned in which was quite equal to a leading prize in some shows. The first was a grand pen of Brown Red chickens which were first at Hexham; the second (Duckwings) were the cup pen at that Show, but lost here on account of a sickle feather having gone; the third a pen of Black Red

chickens. The quality of the class may be better understood when it is known that Mr. Harley's crack pen of Brown Reds were only very highly commended. One otherwise grand Black Red had evidently been in the hands of the barber, treated for fever, or what we cannot say, but the top of his head was clean shaven. *Spanish* were unusually good, two fine pens of open-faced chickens winning the prize and one for the section, and both from one yard; every pen was fit for a prize. The *Hamburghs* were mixed classes, but the entries good; the Spangles of fair quality; the Penoils really good throughout, Gold being first and Silver second. Any other variety were first Crêve-Cœurs, and second Black Hamburghs. In Black Red *Bantams* there were some grand cocks, but the hens were not good; while on the contrary there were many good pens in the next class, where Piles were first-and-cup and Duckwings second, and in the following class Blacks were first and White-booted second; and in single cocks the first was a Pile, small and good in colour, and second Black Rose-combed. There were some Black Reds in this class very good in colour, but long in body and wing, and squirrel-tailed. The Cottagers' was a nice class. Aylesbury *Ducks* were a nice lot, but the Rouens a most extraordinary class, alike in size, with colour, marking, and bills. Some very pretty little Calls won in the next class. The Selling class was but poor. *Turkeys* were a good lot, the winners of the Cambridge variety. *Geese* were very large and good; the first Grey, and second White.

Pigeons had but few classes, the standards, such as Carriers, Tumblers, &c., not being provided for. *Pouters* were first, the first being White in grand show, large and fine in girth and limb; second Blues, equally large, but not so good in girth; a pair of most showy Blacks being highly commended, as also several other pens. *Nuns* were a large and good class; the winners very small. *Fantails* were poor, except the first-prize pen. In *Jacobins* the first were Reds and second Yellows: this was a good class. *Turbits* were in many cases fonl-thighed, but the two winning pens were really good; first Shell-crowned Silvers, faulty only in bars; second Blues, with spike crowns, but a little foul. English *Owls* were a large good class; the first Blues, and second Silvers. The Variety class had many standard birds, the first going to an exquisite pair of Almonds, second to Black Letz, and third to Dun Barbs. This was a "hot" class. The Selling class, like the poultry, was very poor. The point cup for Pigeons was won by Mr. Brydone of Edinburgh.

Cage Birds were a very good show, much bettar in fact than we have seen here before, the Scotch Fancy showing-up well, and being grand in style and colour. In Clear *Don* cocks the first was a Yellow and second Buff, but both were Yellows in hens, these being superior to the Flecked or Marked birds. There were some capital *Greens*, the winners being in fact about the best in the Show, the colour most perfect. Any other cage birds were numerous and good, the first going to a Jonque Variegated Goldfinch Mule of great beauty, second a moulted Goldfinch, and third a Bullfinch, while several good Goldfinch Mules were noticed in the list.

Dorkings.—1, D. Hardie, Priesthaugh. 2, T. Raines, Stirling. *vhc*, J. White. *hc*, G. Amos, Melrose; W. Martin, Stranraer. *c*, R. Reed, Canonbie. *Chickens.*—Cup and 1, D. Gellatly, Meigle. 2, G. Parker, Riddell. *hc*, J. White; R. Reed. *c*, G. Amos; T. Raines; J. White.

Cochin-China.—1, Mrs. W. Steven, Montrose. 2, W. Martin. *vhc*, Capt. G. F. Lyon, Kirkmichael. *hc*, Mrs. W. Steven; J. Wyse, Falkirk; A. Hutchison, Stranraer.

Brahma Pootra.—1 and 2, T. Raines. *vhc*, R. Maxwell, Dumfries; J. A. Dempster, Stirling. *hc*, J. Sandeman, Dundee. *c*, Capt. G. F. Lyon; W. G. Duncan, Dundee.

Game.—Cup, W. Ormerod. 2, Miss M. J. Nelson, Cockshaw. 3, J. A. Mather. *vhc*, D. Harley, Edinburgh. *hc*, W. Younghusband; W. Allen; J. A. Mather; Miss M. J. Nelson; D. Harley; J. Brough; W. Beveridge; R. M'Adam.

Spanish.—1 and 2, Mrs. Gracie. *vhc*, H. Wilkinson. *hc*, Willoughby and Purves; Mrs. W. Steven; W. Paterson; W. Martin. *c*, W. Paterson.

Hamburghs.—*Spangled.*—1, H. A. Clark. 2, G. Campbell. *hc*, W. Martin; H. Pickles. *Pencilled.*—1, D. Cheyne. 2, H. A. Clark. *vhc*, W. Linton; J. Taylor. *hc*, A. Pratt. *c*, D. Cheyne; T. Dickson.

Any other Variety.—1 and *vhc*, W. R. Park. 2, H. A. Clark. *hc*, T. Baillie; J. Taylor; W. Bearpark.

Bantams.—*Reds.*—1, Miss M. J. Nelson. 2, G. Dowie. *Any other variety.*—1, R. H. Ashton. 2, A. G. Lindsay. *hc*, J. Taylor; R. H. Ashton; R. Youle. *c*, J. Fairbairn; Miss J. M. Frew; Wells & Sherwise. *Any variety.*—*Cock.*—1, W. M'Gregor. 2, R. H. Ashton. *hc*, G. M'Millan; J. Ferry; Miss R. C. Frew.

Game Bantams.—*Any other variety.*—Cup and 2, Miss M. J. Nelson. *hc*, R. Youle; H. H Thomson. *c*, A. Hutton.

Cottagers' Class.—1, Mrs. Hinton. 2, Mrs. W. Allan. *hc*, J. Beith; R. H. Ashton. *c*, Mrs. Sharp; Mrs. Waugh.

Ducks.—*Aylesbury.*—1, — Dryden. 2, Capt. G. F. Lyon. *hc*, Lord A. Cecil. *c*, Lord A. Cecil; Mrs. Dickenson. *Rouen.*—1, D. Hardie. 2, W. Martin. *vhc*, J. A. Mather; D. Hardie; Miss M.IS. Nelson. *hc*, J. Steel. *c*, Capt. G. F. Lyon. *Indian or Call.*—1 and 2, D. Hardie *vhc*, J. T. Cathcart.

Selling Class.—1, W. Linton. 2, R. H Ashton. *c*, W. Paterson; T. Young.

Turkeys.—1, D. Hardie. 2, J. Allan. *hc*, Earl of Haddington.

Geese.—1, D. Hardie. 2, Lord A. Cecil. *hc*, D. Hardie; W. Brydone. *c*, G. Hamilton.

PIGEONS.

Pouters.—1 and 2, J. Dye. *hc*, A. Anderson; J. Dye; M'Gill Skinner (2); J. E. Spence.

Fantails.—1, A. Crosbie. 2, A. Smith.

Nuns.—1, W. Brydone. 2, M'Gill Skinner. *hc*, R. Laurie (2); W. Brydone; E. North.

Jacobins.—1 and 2, W. Brydone. *hc*, R. Raines.

Turbits.—1, W. Brydone. 2, A. Crosbie. *vhc*, R. Laurie; W. Brydone. *hc*, R. Laurie; J. Dye (3); M'Gill Skinner.

Owls.—*English.*—1, W. Brydone. 2, J. Dye. *vhc*, H. & G. Brown. *hc*, R. Laurie; J. Dye; A. Anderson; W. Brydone. *c*, A. Anderson.

Any other Variety.—1, W. Brydone. 2, A. Crosbie. 3, J. E. Spence. *vhc*, J. Dye. *hc*, A. Smith; J. Dye; M'Gill Skinner. *c*, E. North.

Selling Class.—1, A. Anderson. 2, J. Dye. *hc*, R. Raines; W. Brydone; M'Gill Skinner. *c*, W. Ritchie; J. Day (2); E. North (2); A. Hutton.

W. Brydone, Dunae, winner of Pigeon Cup.

CAGE BIRDS.

Yellow or Buff Don.—*Cock.*—1, Miss Hawkins. 2, R. Hunter. *hc*, W. Mirtle; J. Hardie; R. Hunter. *c*, T. Darling. *Hen.*—1, Miss Hawkins. 2, T. Darling. *hc*, R. Hunter (2); A. Mason. *c*, A. Mason; A. Jack.

Yellow or Buff-flecked Don.—*Cock.*—1, W. Mirtle. 2, R. Hunter. *vhc*, A. Mason; H. Mein. *hc*, Miss Drummond; T. Darling. *Hen.*—1 and *c*, R. Hunter. 2, A. Jack. *hc*, T. Darling (2); Miss Hawkins; J. Hardie (2).

Canary.—*Green.*—1, R. Hunter. 2, A. Mason. *hc*, A. Jack. *c*, J. Hardie.

Cage Bird.—1, T. Wilson. 2, J. Shiel. 3, J. Wishart. *vhc*, T. Frood; W. Douglas. *hc*, T. Frood; J. Shiel, jon.; R. Beattie; T. Wilson; W. Speirs. *c*, J. Crawford; A. Drummond; R. Moffat; J. Laidlaw; J. Wishart.

Parrots.—1, Mrs. Paterson. 2, Mrs. Main. *hc*, W. Romanes, Melrose. R. Hunter, Galashiels, winner of Canary Cup.

Judge.—Mr. E. Hutton, Pudsey, Leeds.

NATIONAL PERISTERONIC SOCIETY'S GRAND ANNUAL SHOW

AT THE CRYSTAL PALACE, Tuesday, January 26th.

The notice of this Show which we now place before our readers is perhaps somewhat impatiently looked for. We may say that we found it impossible to complete such a report as the Show merited in the few hours by which it preceded the issue of our last number.

This Exhibition, for quality of the birds, their numbers, or the perfection of the thousand and one arrangements necessary to prevent a hitch, proves what rapid strides in popular favour the National Peristeronic Society has made even during the last year. New names, new studs of Pigeons will be very noticeable in our description, and further indicates that amongst the members are working officers and a most energetic Committee. The Show was held as heretofore in the tropical department of the Crystal Palace, entering which, and following the rule of the road, we turn to the left, and find ourselves at once before the first of that long series of mahagony pens, so light and so uniform, admiring the Barbs of Mr. Hedley and Mr. Heritage. Some were specimens of the highest class. One young Red we singled out in Mr. Hedley's pen as a bird of extraordinary promise, and expect to hear of him again. Next are placed Mr. Gill's Almonds, then three pens containing about fifty birds of Mr. J. B. Jayne of Croydon, next Mr. Merck's contribution, and lastly Mr. Heritage's and Mr. Johnstone's. These almond-coloured birds formed a grand display if all the other Pigeons had flown away. The barleycorn beak, the puny wattle, the high forehead, the wide skull, the dolphin eye, the little coquettish whisker were here to the heart's content, whilst their variegated and bright feathers became resplendent as the beams of light descended on them through the crystal roof. Such a collection has not at any one time been seen before. We were gratified to find our old but too neglected favourites the Black Mottles represented by some good birds of Mr. Henning's. Next is a pen of good clean-cut clear-feathered Baldheads of Mr. South; then some good Baldheads shown by Mr. Newman. Mr. Clay of Manchester showed English and foreign Owls, the first exceptionally good; also some very stout Barbs, and a magnificent pair of Dun Carriers. We preferred the hen, though the cock is the hero of a hundred fights, and retains his prime condition.

This year Pouters were not remarkable for their absence, one table extending the whole length of the Alhambra façade, and containing compartments for thirty-one birds, was fully occupied by twelve grand birds of Mr. Gresham; fourteen shown by Mr. Gill, including some fine Yellows, and half a dozen by Capt. W. Hill, in the number a young Blue cock, every inch a Pouter, and perfect in line and contour. Mr. Herbert exhibited Owls, Magpies, and Turbits; Mr. Stevenson also Turbits of a rich yellow tint, and Magpies. Next is a pair of Jacobins, Mr. Easten's of Hull; the close frill, the hood, the true-shaped Jack skull here proved what skill and patience the birds had received from their owner. Mr. Easten also sent some good Yellow Turbits. In adjoining pens are Mr. Tegetmeier's Pigmy Pouters and homing birds, classes in which he is pre-eminent. Then comes a pen of Mr. South's Turbits; the rich, clear, and deep colour of these birds was so striking that we heard one good fancier confess how one illusion had been destroyed: he has hitherto felt confident he was first in colour for Red Turbits, and now he saw he was a bad second. We now have to notice a pair of that popular variety, the White Fantail, containing twelve birds, the flower of Mr. Vander Meersch's famous stock, and well they sustained his reputation. About two dozen beehive pens for single birds filled the centre table, and they are tenanted by young Carriers from the lofts of Mr. Hedley and Mr. Heritage. The majority were birds of high excellence, even for these days of Carrier development, and they formed a prominent feature in the Show.

Carriers, always the bird *par excellence* in the National Peristeronic gatherings, were represented here also by Col. Hassard, who penned a couple of dozen Blacks and Duns, and who, true

to his old fancy, sticks to the Blues, whilst many forsake them for the more popular colours; and we rejoiced to find he had sent fiue excellent Blues and Silvers to put in an appearance. Carriers are further represented by a pen of twelve fine birds shown by Mr. Hedley; by seven birds of an energetic fancier, Mr. Sargent; by two pens of Mr. Pratt; by twelve birds of Mr. Keylor, showing great snbstance; by twelve birds of Mr. Crisp, stylish and promising, also by two Whites—we see he is in earnest to follow up his Bristol success (cup for Whites), in which as a fancier of the right sort he has our hearty good wishes —by fifteen excellent birds of Mr. Faith's, ono of our oldest Carrier fanciers; by thirty birds from a fancier well settled in the right groove for Blues, Blacks, and Duns—Mr. Hodgson; by twenty Blues and Blacks from Mr. Ord (perhaps not such a display as in some former years, but then how many of his strain are there not in the lofts of our most noted judges?); by some excellent birds of Mr. Gill's, and by the Plymouth contingent sent by Mr. Square, always a powerful auxiliary in these grand shows; by twenty Blacks and Duns shown by an old member of the Society, Mr. Feltham—good birds, though we understand his best were in the country. We mnst now dismiss the Carriers, yet not without expressing a hope that in the next annual Show Mr. Montgomery may find his way from Belfast and pen a few of his magnificent strain of this breed.

There is a Pigeon bearing two names—*i.e.*, "Homing," to denote its characteristic, and "Antwerp," to mark the country of its origin. We find, however, it bears a third appellation—*i.e.*, the "Carrier;" at least we observed some pens so labelled. We hope to offer no indignity to their possessor if we include them not amongst Carriers as the term is accepted by us, but describe them as "Homing birds." About 150 of these were exhibited by Mr. Hudson; many of these birds of noted pedigrees, others crossed with the Dragoon, a fine collection of Smerles and Blue Beards, and in colours Blue, Blne-chequered, and Red-cheqnered. The journeys they had performed were dnly noted in the pens, ranging from 150 to 580 miles. Mr. Theobald sent a pen of fourteen fine-looking "Homers," and Mr. Little also a pen of twenty-four Red-chequered of his well-known strain.

We arrive now before a pen of Blue Dragoons, and of the true type, shown by Mr. Barnet; next is the pen of Mr. Esquilant, containing Silver and Powder-blue Owls. On sustaining this old-fashioned strain our well-known judge and enthusiastic Pigeon lover has exercised his skill for some years with the result now to place seventeen fine specimens before the younger fancier, to educate the eye but too frequently erring since the introduction of the Foreign variety as to the true points of the English Owl, which for beanty of shape, colour, and carriage we trust will retain its position amongst our most highly-prized Toys. Next is a pen of the same variety shown by Mr. P. H. Jones, very level in quality, and a pretty collection. In contrast with the prim close plumage of the Owl comes a pair of that highly-prized breed—the modern Trumpeter, shown by a recently-elected member of the Scciety, Mr. Schweitzer, who also exhibited a pen of twenty-four Foreign Owls—Silver, Whites, Blues, &c., each bird a gem. This pen could not fail to be a great attraction to visitors, in fact it was the largest collection we recollect to have seen or heard of as the property of any fancier. We wish Mr. Schweitzer all success in results after he has paired his birds. A pair of Jacobins also his property were high-class specimens. Mr. Whitehead's pen contained fourteen Yellow Owls (English), all of excellent colour, not so short-beaked as the Blues, their *confrères;* but where shall we find better?

Close by, Mr. Banks' Jacobins arrested the attention of all judges by their very superior style and quality, to which Mr. Bull's Jacobins proved themselves not unworthy neighbours. Some very excellent birds (perhaps, if they were well looked for, a few of the best Jacks in the country), would be found in his pen. This variety now holding snch a prominent place in public taste was worthily represented. Mr. Tegetmeier's pen of twelve Blue Dragoons had the head, beak, skull, colour, and carriage which this bird ought to possess. Mr. Whitehead's pen of Dragoons consisted of Grizzles, Blues, and Yellows. A very interesting collection. Of Yellow Dragoons, so profusely represented in former years, there was bnt one pen. It was filled by Mr. Betty's birds, which found admirers as usual. Lastly, a pen of Almonds, somewhat out of place it struck ns, amongst the larger Dragoons and Antwerps. We trust Mr. Ford will secure a place next year for his very pretty Tumblers near their own class.

Such are the notes we jotted down whilst doing the tour of the Show. Its extent is proved by their length, which we shall not extend further than to congratulate the officers and members of the National Peristeronic Society on their successful effort this year to carry ont one of the main objects in their scheme, to popularise and extend Pigeon cultnre.

Crystal Palace Bird Show.—The twelfth annual Exhibition of Canaries and British and Foreign Cage Birds is fixed to take place on Saturday, February 13th, extending to the 18th. The entries are announced to close February 3rd, after which date all post entries will be charged 25 per cent. in addition to the fixed entry. Post entries to close February 6th. The classes for entering birds amount to the unprecedented number of eighty, besides a class (a new feature in the Exhibition) for show cages, for which a silver medal will be awarded as a first prize, and two money prizes for second and third. The prizes offered for cages will be awarded with the view of giving a uniform appearance to cage bird shows. The cages will include fittings, which shall in the opinion of the Judges best fulfil the combined requirements of cheapness and excellence of construction. In the Selling class each exhibitor will be entitled to the same number of entries as he shall have made in the competing classes. The classes for Canaries and Mules extend to forty-one, with fourteen for British birds, three classes for birds of passage and migratory birds, and twenty-one classes for foreign birds. The Judges are Messrs. Harrison Weir, J. Jenner Weir, G. J. Barnesby, A. Willmore, and R. L. Wallace.

DEPRESSION OF HIVE FRAMES.

I thank Mr. Cheshire for his offer of assistance in trigonometrical calculation (page 601 of last volume), but as I require no such instruction, and as it has no bearing on the question at issue, it may be dispensed with.

I still maintain that it is impossible for the bees to depress the bars as stated. A bar might warp from fault in the wood, bnt not from the weight of the bees, considering that a swarm is distributed over several bars, and that the bees on one bar do not suspend themselves from the centre only, but from nearly the whole length. As to the bees commencing their comb in the centre, that greatly depends on the position of the hive, for they generally commence from the highest point, and, as it is extended along the bar, must necessarily give a certain amonnt of strength, and the conformation of the cells tends to support themselves. As to the bees attaching the comb to the floor-board, the instance Mr. Cheshire gives is no proof that they do so naturally; in his case it might have arisen from careless manipulation, and allowing pieces of comb to fall in the hive, which the bees would immediately make fast, and should those pieces be within a certain distance of the main comb they would of course attach them. I deny that bees ever naturally build down to the floorboards.

As Mr. Cheshire refers me to his letter, I refer him to mine. I said bees do "sometimes" attach the comb to the bottom "rail," not floorboard.

With regard to ventilation, Mr. Cheshire says that in full skeps the cluster extends down to the floorboard. I can only say I never saw so large a swarm in winter; and even if they did it could have no prejudicial effect, for no one will deny that bees winter as well in a skep as in any other hive if they have shelter and sufficient food.

I am still at a loss to understand how the bottom rail aids ventilation. I suppose Mr. Cheshire will allow that the heat in a hive is generated by the bees, as warm air is lighter than cold; but Mr. Cheshire does not tell how he gets rid of the warm air at the top to allow the cold to take its place, or how the said rail assists in doing so. Mr. Cheshire's letter as a literary production is all very good, but if the theories therein promulgated are correct, then the attempts that have been made to instil into my mind common reason have signally failed. Mr. Cheshire appears to be singularly erratic in his commendation of hives, and I would like to know how he can reconcile his letter in the "British Bee Journal," pages 186, 187, and 188, with his letter in the *Journal of Horticulture* of November 26th. Mr. Cheshire expresses himself puzzled by the last sentence of my letter. May I be allowed to explain that, if my memory serves me, the hive which Mr. Cheshire claims as his consisted of a combination of several gentlemen's ideas, and because the one improvement does not exist in his (?) he condemns it? Why does not Mr. Cheshire send his hive to the Editor of the "British Bee Journal" as he promised to do?—Pecchione.

THE SLINGER.

Some weeks ago one of your correspondents in reply to my letter on the slinger, asks, "Where is Mr. Pettigrew's authority for saying the patrons of the slinger tell us that swarms spend their first year in filling the bar frames with combs?" The literature of the bar-frame school which I have seen has led to this conviction. At the present moment I cannot remember of any records given of results of swarms in bar-framers. The principal bar-frame apiarian in the neighbourhood of Manchester told me, as I said before, that both honey and swarms could not be obtained in one season. When I penned the remark I had my mind fixed on an article of recent date, written as I think by an inventor or improver of bar-frame hives. I cannot lay my hands on the number which contained this article, but

I am of opinion that it was in a recent number of a periodical that I read very explicit statements that swarms spent their first year in filling frames with combs. But Mr. Hunter should be able to correct us (if we have been misled) from his own experience. What was the weight of his heaviest swarm last year? How much honey did he obtain from any one swarm? If his own locality is not a good one for honey, perhaps he will help us to information as to what swarms in frame hives have done elsewhere in their first year. If swarms in such hives rise to 100 lbs. and upwards first year (and why should they not?), the slinger may be used in casting honey from their combs before they are removed to the heather. Heather honey cannot be extracted by the machine in question; and I think it right to let Mr. Hunter know that the gentleman who bought the machine could not get it to extract heather honey, and he tried it fairly before he sent it here. The honey put into the machine here had never been "allowed to set," and at the present date is not set, standing where it did three months ago.

I have read an account of the slinger from the same pen that I fancy wrote the remark about the first year being spent by swarms in filling their frames. Mr. Hunter well knows the writer of this quotation:—"Extracted honey (by the machine) is for two reasons hardly equal in quality to run honey. It usually contains more water, and is darker in colour; but if the whole of the comb be sealed the first objection obviously will not stand, because bees allow the excess of moisture to evaporate before sealing. The strong colour arises from the stain given by the old and tough comb, which is more suitable for slinging than the young and tender."

The correctness of this writer's views may be questioned. I merely quote his utterances as I find them.—A. Pettigrew.

OUR LETTER BOX.

Intermittent Laying (*Dark Brahma*).—Your hens are merely suffering from change of home. It is usual for them on such occasions to leave off laying for a day or two, till they get settled-down in their new abode. They will soon begin again. Dress the cocks' combs with some citron ointment, and they will soon be well.

Brahma Crop-bound (*T. H. E.*).—See what is said on page 83 of our last number.

White Peacock (*D. Drake*).—The White is a distinct breed. When crossed with the common bird the white is mingled with the various colours, and often produces a very pretty and striking effect.

Proper Homing Pigeons (*G. H. R.*).—The Long-faced Antwerps are the proper Homing Pigeons. The Short-faced may perhaps home fairly; and the old-fashioned English homer was the Dragoon. If you get good homers when you let them out they are sure to go home; but get such, let them breed, and then train their young.

Crystal Palace Canary Show (*M. G.*).—No bird will be allowed to be removed until after 5 P.M. on the 18th of February. See the eighteenth rule.

Feeding Bees (*Alicia*).—See what is said on page 89 of our last number.

Canary and Goldfinch Mules (*Ornis Aghalee*).—The best-coloured Mules (Jonques) are undoubtedly bred from deep-coloured Canaries paired with Goldfinches. You may experience far less trouble when breeding with a cock Goldfinch and a Canary hen than *vice versâ*. As a rule, a hen Canary will go to nest and attend to her eggs and the young broods in a more shipshape way than a Goldfinch hen will. One understands the nature of her duties; the other bungles over her work, and fails to perform it satisfactorily. When breeding with a Goldfinch hen it is very necessary you have a Canary hen going on at the same time, so that you may transfer the eggs of the former to the nest of the latter. It is odds against the Goldfinch hen laying all her eggs in the nest; she may attempt to construct, or you may have to provide for her. They (the Goldfinch hens) take it into their heads sometimes to lay their eggs partly in the nest, and frequently they may be found upon the bottom of the cage. It is fortunate if they are not found broken. You are doing quite right in temporarily placing the Goldfinch hen with the Canaries; it will familiarise her somewhat. We should prefer the Jonque or deep yellow cock for her mate; but it will be time enough if you place them in their breeding quarters at the middle or latter end of April. Goldfinches are not ready for breeding purposes so early in the season as Canaries, unless they have been forwarded with an artificial temperature. We have known instances of Goldfinches breeding in early March, but we suppose, from what you have stated in your letters, that your birds have been kept away from artificial heat. You may let the birds "share each other's society" until the middle of March (when you will be breeding with the Canaries); and if by then you should perchance notice any one of the three cock birds "scrape an acquaintance" with the hen Goldfinch, then you may select the pair and place them in a smaller cage to make the cock Canary still more attentive in his loving devotions. If you were to keep the Goldfinch hen with the Canary hens in the apartment over the doorway whilst they were breeding, her presence very likely would cause an annoyance, and the work of building would not proceed so satisfactorily. Incubation would also be retarded, and broken eggs might be found.

Seed for Canaries (*R. H.*).—The seed we referred to in a previous issue, understood in some of the agricultural districts by the name of "kedlock," is corn-cale, a species of wild mustard seed (Charlock arvensis), the blossom of which is yellow, the seed being of a brownish colour. It grows very freely in corn fields. As the corn-cale is not a marketable seed, corn chandlers or seed merchants would be unlikely to supply it. The way we became possessed of our seed is through having purchased it from those who have had the opportunity of obtaining the same either as a perquisite or at a cheap sum after it had been sifted from threshed corn. An advertisement offering to purchase the seed would no doubt bring some to hand. Even since receiving your letter we have had the offer of half a peck from a bird dealer, which offer we accepted. A little rubbish, such as sweepings and fine chaff, is mostly unavoidably mixed with the "kedlock" or cale seed, and we find it better, when supplying it to the birds, to occasionally throw a handful or so on to the bottoms of the cages for the birds to seek after. This plan is preferable to placing it either in the seed fountains or drawers, and the birds are none the worse for being kept industriously employed hunting it up. The cale seed is of a warmish nature, but it suits our Canaries well, in the winter especially. Goldfinches will eat it, and Linnets have great liking for the same. The cale seed may be given to birds kept in small cages besides those in aviaries. It is of more value now, considering the scarcity of Canary seed, which is realising 200*s.* per quarter, with the not very cheering prospect to Canary fanciers of it still increasing in price. It behoves bird-keepers to study economy by bringing into use more freely hemp, rape (scalded), flax, white millet, and groats, and even the coarser portion of Scotch oatmeal, and crushed biscuits and German paste. By this plan the use of so much Canary seed may be avoided.

Cockatoo Management (*Polly*).—It should have some tepid water in a soup plate to bathe in once or twice a-week; and a constant supply of fresh water to drink. Feed on cold sopped bread and milk two days running, on the next rice boiled in milk, and on the fourth day soaked Indian corn. In addition to this a small quantity of hemp and canary seed mixed should be put in a separate tin every day. We should also occasionally give it some watercress, a radish, or a piece of raw potato, and sometimes a nut or some orange; but it should never taste pastry, meat, nor, in fact, anything that has fat in it.

Crickets and Beetles (*J. Ross*).—Try Chase's beetle poison. It is sold by chemists.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. Jan. and Feb.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 27	30.259	46.6	45 8	S.W.	40.9	50.8	37.5	60.5	36.1	0.013
Th. 28	30.192	46.7	46.6	S.W.	41.6	51 5	41.1	80 1	37.0	0.012
Fri. 29	30 316	49.2	49.0	W.	42.9	51.0	46.0	52 3	43.0	0.380
Sat. 30	30 572	33 9	31.8	E.	43.5	50.2	36.4	75.1	34 3	—
Sun. 31	30 592	38.0	36.6	S.	40.5	43.4	33.4	72.2	28 8	—
Mo. 1	30.372	35.7	35.0	N.W.	39.0	47.2	31.1	73.8	27.7	—
Tu. 2	30.251	32.6	32.5	N.W.	38 7	42.9	31.7	51 7	28.1	—
Means	30.365	40.3	39.6		41.0	48.1	36.7	66.5	33 6	0.415

REMARKS.

27th.—Dull, though fair in the morning, and soon becoming a fine bright day.

28th.—Rain early, but soon clearing up; on the whole a fine, bright, and pleasant day.

29th.—A most uncomfortable day and night; very little rain fell, but it was a continued small fall during the day.

30th.—Very fine bright day, but rather windy and cold.

31st.—Very fine and pleasant all day.

Feb. 1st.—Fair, but rather hazy till 10 A.M., very fine after.

2nd.—Rather dense fog till after 9 A.M., and slightly so all day.

Temperature much the same as last week, but its range slightly greater, as there has been less rain and a less cloudy sky. Barometer very high throughout.—G. J. Symons.

COVENT GARDEN MARKET.—February 3.

The general demands of the trade have somewhat improved prices, but the supply is still well kept up, and very few articles will bear a higher quotation. French goods are coming in good condition, and frame Potatoes from the Channel Islands are now offered at 2*s.* to 3*s.* per pound.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	0	0	to 0	0	Mulberries ℔ lb.	0	0	to 0	0
Apricots doz.	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries ℔ lb.	0	0	0	0	Oranges ℔ 100	8	0	12	0
Chestnuts ½ bushel	10	0	20	0	Peaches doz.	0	0	0	0
Currants ½ sieve	0	0	0	0	Pears, kitchen doz.	2	0	3	0
Black do.	0	0	0	0	dessert doz.	2	0	4	0
Figs doz.	0	0	0	0	Pine Apples lb.	2	0	4	0
Filberts lb.	1	0	1	6	Plums ½ sieve	0	0	0	0
Cobs lb.	1	6	2	0	Quinces doz.	0	0	0	0
Gooseberries quart	0	0	0	0	Raspberries lb.	0	0	0	0
Grapes, hothouse lb.	6	0	11	0	Strawberries ℔ lb.	0	0	0	0
Lemons ℔ 100	8	0	12	0	Walnuts bushel	8	0	12	0
Melons each	0	0	0	0	ditto ℔ 100	1	0	1	9

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes doz.	3	0	to 6	0	Leeks	0	3	to 0	6
Asparagus ℔ 100	6	0	10	0	Lettuce doz.	1	0	2	0
French per bundle	0	0	0	0	Mushrooms pottle	0	9	2	0
Beans, Kidney per 100	2	0	3	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	0	0	0	0	Onions bushel	3	0	5	0
Beet, Red doz	1	0	2	0	pickling quart	0	6	0	0
Broccoli bundle	0	3	1	6	Parsley per doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	3	0	4	0	Parsnips doz.	0	9	1	0
Cabbage doz.	1	6	2	6	Peas quart	0	0	0	0
Carrots bunch	0	6	0	8	Potatoes bushel	2	6	5	0
Capsicums ℔ 100	0	0	0	0	Kidney do.	3	0	6	8
Cauliflower doz.	4	0	8	0	Radishes doz. bunches	1	0	1	0
Celery bundle	1	8	2	0	Rhubarb bundle	1	0	1	6
Coleworts doz. bunches	4	0	6	0	Salsafy bundle	1	6	0	0
Cucumbers each	2	0	3	0	Scorzonera bundle	1	0	0	0
pickling doz.	0	0	0	0	Sea-kale basket	2	0	3	6
Endive doz.	2	0	0	0	Shallots lb.	0	6	0	6
Fennel bunch	0	3	0	0	Spinach bushel	0	0	4	0
Garlic lb.	0	6	0	0	Tomatoes doz.	0	0	0	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish bundle	0	0	4	0	Vegetable Marrows doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week.	FEBRUARY 11—17, 1875.	Average Temperature near London.			Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
11	Th	Royal Society at 8.30 P.M.	44.5	29.8	37.2	23 af 7	6 af 5	22 af 9	morn.	5	14 30	42
12	F		44.9	29.6	37.2	21 7	8 5	39 9	8 af 0	6	14 29	43
13	S	Royal Botanic Society, 3.45 P.M.	44.3	29.6	36.9	20 7	9 5	1 10	36 1	☽	14 27	44
14	Sun	1 Sunday in Lent.	45.6	30.9	39.3	18 7	11 5	31 10	4 3	8	14 25	45
15	M	Entomological Society at 7 P.M.	47.0	31.3	39.2	16 7	13 5	16 11	25 4	9	14 22	46
16	Tu	Zoological Society at 8.30 P.M.	47.0	30.6	38.8	14 7	15 5	after.	30 5	10	14 18	47
17	W	Royal Horticultural Fruit and Floral Committees, 1 P.M.	46.6	30.6	38.6	12 7	17 5	32 1	19 6	11	14 13	48

*From observations taken near London during forty-three years, the average day temperature of the week is 45.7°; and its night temperature 30.3°.

SOME BEDDING PLANTS FROM SEED.

IT may be well to preface this paper by the remark that it is meant especially for those who, though anxious to have a well-furnished summer flower garden, have not the accommodation necessary for wintering a large stock of bedding plants. This class is, happily, year by year becoming larger, and the standard of taste is being so rapidly elevated that flowers, instead of being looked upon as things of luxury, are almost becoming necessaries of life. To very many a home without a nice garden is not a home at all, but only a house to live in. This being so, that law which almost always brings a supply where there is a demand is fast giving us a stock of hardy and annual plants specially adapted to the wants of the almost glassless amateur. Less than twenty years ago little could be done in the way of furnishing a flower garden with continuous summer-blooming plants, except with tender things kept over winter. Now, between those which are hardy and those which can be got up from seed in spring by the help of a little glass, a good display can be made.

It is presumed that the amateur has a frame or two and the means of making a hotbed, which should be done early in February; and as so many, in fact all, the good fortunes of the year depend upon this hotbed, it may be well to say a few words about the making of it.

At this season it is no mere cartload or so of stable litter and leaves that will do. For a single-light frame, say 6 feet by 3½ feet—and in most of cases this will be amply sufficient—a bed 9 feet by 6½ feet will be needed, which gives a margin of 18 inches all round the frame; and to do this four or five cartloads, according to size, of stable dung will be needed. If leaves are to be had, less by a cartload will do. They serve to steady and prolong the heat; but if the dung be properly prepared, and the bed well built, they can be very well done without. Let the dung be first thrown up into a high conical heap, shaking it well in doing so; and as at this season there is more danger of its being too wet than too dry, the outside of the heap should be lightly combed with a wooden rake, which helps to run off the heavy rains. When fermentation has set in, turn the heap two or three times at intervals of forty-eight hours or so, until the heat begins to moderate, and the dung is all of a uniform dark brown colour, when it is ready for use.

To make the bed, measure a space 6½ feet by 9 feet, or 3 feet more each way than the size of the frame, whatever that may be, drive in a stout stake at each corner, and proceed to build by putting on thin layers all round, shaking it well, and beating each layer level with the back of the fork. It is a bad practice to tread it every two or three layers, as I have seen some do; the weight of the frame and pots will soon make it solid enough. When about four-fifths of the material have been used slope the top of the bed so that it may be 6 inches lower at the front than at the back, and then put on the frame, when the remainder of the dung may be built round about it quite up to the top. I prefer this method early in the season for small frames; later and with larger frames 6 inches of a margin is sufficient. In a day or two a strong heat accompanied by a rank steam will be given off. This will not continue long if the dung has been well fermented in the first instance, and when the heat stands at about 75°, and the air in the frame is clear or nearly so, it is then fit for anything. For plunging material, although it has some disadvantages, I like nothing better than sawdust; but sandy soil, sifted coal ashes, or tan will do.

The next best thing to having plenty of plants when bedding-time comes is just to have enough and not very many to spare. Surplus plants represent wasted labour, which might have been more profitably employed in improving the quality of those really needed. It is, therefore, well to have an exact calculation made beforehand of what is wanted, allowing, of course, a pretty wide margin for mishaps.

Ageratums (the dwarf varieties).—If cuttings of these are to be had they are better than raising seedlings, and they strike very freely in heat, but the strain is now so well fixed that a very equal stock can be had from seed. Sow somewhat thinly in a shallow box or in pots, covering very lightly with fine soil. When the seedlings have attained two pair of leaves prick them into 3-inch pots, two in each, or two abreast, into long narrow boxes, out of which they are conveniently planted. Such of them as show undue grossness of growth should be pulled up as soon as noticed, or, at least, separated from the rest.

The best varieties are Chater's Imperial Dwarf, clear azure blue; Pluto, lightish blue, very profuse bloomer; Tom Thumb, porcelain-coloured.

Lobelias.—The Erinus varieties, especially the dwarf sorts, are indispensable in the flower garden, and they should be sown as early as possible. The seed is very small, and being sent out in infinitesimal pinches, which are called packets, requires to be carefully handled. Prepare the pots by thoroughly draining, and use soil composed of half loam, half leaf mould, tempered by a little silver sand, that for the top of the pot being finely sifted. Press it rather firmly down, so that it may not get dry so soon on the surface as it would if loose, making it quite smooth on the top. Having sown the seed as evenly as possible, do not cover it with soil at all, but give one watering through a very fine-rosed watering-pot, and then cover the pot with a sheet of glass. If it can be done without, do not water again until after the seed has germinated. If the pots should afterwards get dry take them out of the frame, and place them for a few minutes in 3 or 4 inches of lukewarm water, which will moisten the soil without disturbing the seeds. When the seedlings can be handled, prick them 2 inches apart into boxes, either returning them into the hotbed frame for two or three days, or, if put into a cold one, shading and keeping them close until they are somewhat established.

The following are good sorts:—Lobelia Erinus speciosa, Crystal Palace variety; L. Erinus compacta; L. Erinus

Paxtoniana, bright blue, with white eye, loose grower; L. pumila grandiflora, very dwarf and dense in habit. There are also white, lilac, and crimson varieties very pretty, but not much needed.

Petunias.—The Petunia, although immensely improved of late years, does not receive from florists that degree of attention which it deserves. Our present strain appears to have sprung originally from P. nyctaginiflora and P. integrifolia, or Nierembergia phœnicea as it was first called. Like the allied genus Salpiglossis, it is very variable, so much so that it is hardly possible to propagate any given variety by seed. The colours range through various shades of white, pink, rose, crimson, violet, purple, and green. Could the colours yellow and pure scarlet be imported into it there would be few more showy flowers than the Petunia.

Sow during the middle or end of February, and treat the same as Lobelias. If potted instead of being put into boxes it will be an advantage at planting-out time. As they are apt to grow too gross, the beds they are intended to fill should have little or no manure. For large beds sow the P. grandiflora, varieties kermesina, roseo-alba, and violacea; for smaller beds, atro-violacea and Countess of Ellesmere.

Tagetes signata pumila.—A most serviceable yellow bedding plant on wasted gravelly soils, although it is rather looked down upon. It is generally sown too late, the middle of February being nothing too early to secure good, bushy, little plants. Sow in heat, and when large enough to handle prick-out the seedlings into a cold frame prepared with light loamy soil. Stop and pinch as required to make stout stocky plants.

Verbena venosa.—An all but hardy Verbena with half-tuberous roots, from which, when once a stock has been obtained, it can be afterwards propagated with great facility. Seed sown now will produce plants fit to bed-out, and though they will be somewhat late in coming into bloom, they will make a fine display during the autumn months. The trusses are small, but very numerous, and of a beautiful purplish mauve colour. It makes good back lines for ribbon borders, or for filling the centres of large circular beds. The seed germinates more freely when sown late in spring in a very mild heat than it does in a strong heat at this season.

Gaillardia.—A half-hardy perennial possessed of great blooming powers, not so much used for bedding as it once was. The beginning of March is nothing too late to sow it, pricking-out the seedlings into a cold frame or under hand-glasses. The best known variety is G. picta, but the following are better worth growing:—G. hybrida grandiflora, yellow and scarlet; G. speciosa insignis, crimson; G. coccinea, scarlet; and G. Richardsonii, crimson and orauge.

Dianthus sinensis.—This, well known as the Chinese Pink, is in all its varieties a capital hardy bedding plant. Like its homely relation the Sweet-William, the variety of gorgeous colours which a bed of mixed sorts presents is something wonderful. Sow early, and as every seed will grow, sow thin, at no time allowing the seedlings to spindle-up for want of room. When in bloom during summer they require some attention in removing the seed pods, and even thinning the flowers, which greatly prolong the season of their blooming.

Perilla nankinensis.—This gloomy Nettle is, as an individual plant, about as ugly as it is possible for a plant to be yet few who have a flower garden to fill care to be without a little of it. The seed germinates very slowly, and not always very certainly, and should therefore be sown thickly. Transplant the seedlings into boxes, and protect from spring frosts, as it is very tender. P. laciniatus has deeply-cut leaves, and is rather more ornamental than the old sort.—Robert D. Taylor.

ROYAL HORTICULTURAL SOCIETY.

February 9th.

ANNUAL GENERAL MEETING.

The Annual General Meeting of the Royal Horticultural Society was held last Tuesday in the Council-room, South Kensington, under the presidency of Viscount Bury, the President. The members of Council present were Sir Alfred Slade, Bart.; Sir Coutts Lindsay, Bart.; Mr. Robert Warner, Mr. Little, Mr. W. A. Lindsay (Secretary), Mr. H. Webb, Mr. Kellock, &c. Amongst the Fellows present were Col. Trevor Clarke, Mr. S. H. Godson, Mr. G. F. Wilson, Mr. Robert Fortune, Mr. W. Paul, Dr. Hogg, Dr. Denny, Mr. Veitch, Mr. B. S. Williams, Mr. Hibberd, Mr. Charles Edmonds, Mr. Bull, Mr. Alfred Smee, Rev. George Kemp, Mr. Quilter, Mr. G. T. Saul, Mr. John Lee, Mr. H. Ormson, Mr. J. Bateman, Mr. Haughton, &c.

The Secretary, Mr. W. A. Lindsay, read the advertisement convening the meeting; and also the minutes of the last meeting, which were confirmed.

Mr. Pinches and Mr. Fortune were appointed Scrutineers, and the result of the voting was as follows:—In the place of the vacating members, J. A. Hardcastle, Alfred Smee, F.R.S., and J. Herbert Tritton, the following were elected:—The Hon. and Rev. J. T. Boscawen, Mr. William Longman, and Mr. J. D. Chambers. The extraordinary vacancy caused by the retirement of Lieut.-Gen. the Hon. Sir Alexander H. Gordon was filled by the election of Mr. Frederick Campion. The officers were re-elected as follows:—Viscount Bury, President; Mr. Bonamy Dobree, Treasurer; Mr. W. A. Lindsay, Secretary; Sir Coutts Lindsay, Bart., Sir Alfred Slade, Bart., and Mr. Bonamy Dobree as Expenses Committeemen; Mr. P. M. Leonard, Mr. H. Liggins, and Mr. Conrad H. Pinches as Auditors.

The Report of the Council was taken as read.

The Chairman rose and said—Ladies and Gentlemen: The question I have to submit to you, I am happy to say, will require but a few words from me on the present occasion—that is, upon the Report which the Council think it their duty to submit to you. There was a time when we had reason to believe that this meeting might be somewhat of a stormy character, and that we, the members of the Council, should, perhaps, have to battle for our lives; but I am happy to say that these sinister auguries have been entirely dispersed, and that we find, far from being called upon to encounter any direct or any covert hostility from our landlords the Royal Commissioners, that we are likely to receive from them all the support they can give consistently with their high position [cheers]. It is only quite recently that this happy state of affairs came into existence, or that I should have been able to announce to you the realisation of this happy state of affairs. It is as well to be perfectly candid in this matter, and I will confess that we, the Council of the Royal Horticultural Society, have felt that we have been somewhat hardly dealt with, and that the Commissioners did not appreciate our real position. It is possible, as we felt the interests of ourselves and of the Society have been trembling in the balance, we should not have been so courteous or conciliatory as we might have been under happier circumstances. There is no doubt in the heat of argument we have both said to each other hard things which we regret, and which we regard as better if not said [hear, hear]. We put forward this frank expression of opinion on our part—and I think I express the opinion of my colleagues; and I only hope it will be accepted as frankly as it is given, and that the circumstances will be taken into consideration under which the Report referring to the Commissioners has been made. I must go back only for a moment to the time when we first took office. The Commissioners were placed in relation with the Horticultural Society by a resolution the terms of which were undefined, and which might be taken to mean that both bodies would work in common for a common end. But outside the Royal Commissioners—I had almost said outside the Horticultural Society—there sprung up two bodies who had great and substantial rights under the agreement made with the Royal Commissioners—the Fellows on the one side, and the debenture-holders on the other. At last the time came when the Royal Commissioners, or rather when the Royal Horticultural Society, acting on what they then believed to be not altogether in their own interest, proposed to accept terms from the Royal Commissioners which the outside Fellows of the Royal Horticultural Society considered detrimental to the interests of the Society. Under these circumstances what does an Englishman do? It is suggested that he has rights, and he thinks his rights are invaded, and he accordingly takes constitutional means of asserting them. He moves the rejection of the proposition submitted to him, and if he is successful he places himself in the position of those who made the proposition, and pursues the course of business in the best way he can for himself; indeed, he succeeded the late ministry, and became a minister in power. When we did that we were in something like revolutionary troubles [laughter], and we did the best we could to make ourselves legal; and, according to the best legal advice we could obtain we succeeded in making ourselves a legal tribunal—in making ourselves, the Council of the Royal Horticultural Society, your legal representatives, gentlemen [hear, hear]. But I need not tell you that on all points the Royal Commissioners did not entertain that opinion of our legality which we ourselves were advised to entertain. They disputed our legality, and they would not deal with us as the Council of the Royal Horticultural Society; and from that time until now we have been met with this difficulty—that the Commissioners would not deal with us as frankly as they might have dealt, simply because we were not legally constituted a Council. That, frankly, was our position as regards the Commissioners. The Commissioners knew it. I do not know whether they think the result of the election under your auspices can remove that taint of illegality; but I am strongly inclined to believe, and you may take it as my own opinion and not an official one, that Her Majesty's Commissioners will assume that after the election to-day we are in a legal and proper position. In our position

to-day we have to be careful that there is no flaw as to the legality of our proceedings; but I am sure that at the end of our proceedings any objection to our existence as a legal body will be entirely removed. The position of the Society's finances may not be found to be very sound; but, while it may give the members of the Society ample room for reflection, it is not one which would allow us in any way to despair [hear, hear]. We are the only Society—I will not say the only—but we are the Society which has the means at its disposal to do the greatest amount of good, from our official position, for the horticultural world. We can easily keep that position; but, in order to do that, we must keep shoulder to shoulder and assist each other [hear, hear]. These gardens must be retained in the interest of horticulture. Then the question arises—there are, besides the horticultural Fellows proper, the Fellows who are owners or occupiers of house property all round this neighbourhood. I need not tell you that they are more likely than any others to be interested in keeping open this, one of the lungs of the metropolis [hear, hear], and that they feel that if it went over into the hands of any other body than the Royal Horticultural Society it would be a grievous disaster [applause]. As I have before said, Englishmen if they know they have rights are very careful to associate themselves in defence of those rights, and I think the local Fellows are not at all unlikely to die hard if they are put to it [cheers and laughter]. But I do not, as I said before, believe there will be any necessity for a fight, but that on the contrary—and I wish to repeat it even at the risk of wearying you—the Royal Commissioners are willing to meet us evenly and fairly [hear, hear]. I will not consider it either uncivil or uncourteous if I give this frank plain expression of our feelings and opinions, and say that we are perfectly aware we hold some good trump cards in our hands and know how to deal them on terms of perfect equality [hear, hear]. This will not be construed by members of the Royal Commission as in any sense hostile to them, and I believe I am right in saying that there are many gentlemen present representing the Royal Commissioners who will comment upon any statement I make on your behalf, and who will be able to make, on behalf of the Royal Commissioners any statement whether it be satisfactory or not, or correct or not. I will frankly say I have heard, and perhaps heard from very good authority, that some terms made use of in the Council's Report to the Society have been felt as wounding the feelings of Her Majesty's Commissioners. I hear that two paragraphs in the Report have been construed into a sneer. Now I am sure, and I know I speak the sentiments of my colleagues, that anything like a sneer towards Her Majesty's Commissioners was foreign to our minds [hear, hear]; and I say if such an impression was conveyed to them, I own I frankly regret any expression which can have caused it [applause]. I will, however, ask Her Majesty's Commissioners to remember that at the time this Report was framed the Society was labouring under the smart, I will not say of unjust, but any way of dealings with Her Majesty's Commissioners. One of the principal diversities of opinion between Her Majesty's Commissioners and ourselves is upon the proposed establishment of a skating rink in these Gardens [hear]. Her Majesty's Commissioners have felt offended that we did not communicate with them on the subject, because the agreement under which the rink was to be built was signed by us. The answer to that is a simple one. We are and always have been most desirous to be on the most friendly and open terms with Her Majesty's Commissioners; but I have taken the trouble to look into our letter book, and I can tell you that during the last two years we have seven times addressed letters to Her Majesty's Commissioners requesting them to allow that the Expenses Committee should meet to discuss the affairs of this Society, and on several occasions we were told that it was impossible the Commissioners could allow it to be done. I do not now question whether that was right or wrong. I merely state the fact that, having seven times asked Her Majesty's Commissioners to meet us for the purpose of entering into the affairs of the Society, and having been seven times refused—certainly in the most courteous and civil way—we felt we were bound to act for ourselves in this matter, and that we could not again ask Her Majesty's Commissioners to meet us on the affairs of the Society. Under the Charter and the bye-laws there is only one way of dealing with the affairs of the Society as between ourselves and the Royal Commissioners, and that is through the Expenses Committee. The Expenses Committee and all the monetary affairs of the Royal Horticultural Society are committed to their decision. That is the case. Now when, as I say, we seven times requested that the Expenses Committee should meet, and had seven times been met with a refusal, I think, without entering into bygones, and with a desire to avoid them, you will see it was quite impossible to approach Her Majesty's Commissioners on the subject of the skating rink; and now that they feel aggrieved that we have not consulted them, I hope that the representatives of Her Majesty's Commissioners will accept this frank explanation of the circumstances I have the honour to make to them as the real, true, and only reason why the communication was so long delayed [hear, hear]. And, after all, the concluding communication was not so long delayed, because it was only a few weeks after it was made the Royal Commissioners met, and to that meeting a letter was sent by Sir Coutts Lindsay, giving them the fullest information. I do not know whether I should enter at greater length into the arrangements between this Society and the Royal Commissioners. I hope I have explained our aim and object in acting as we have acted; and, as I have said, if there be anything in our Report written at a time when I am convinced we were labouring under some irritation, and with the notion that our dignity was offended, I regret it, and in the words of Hotspur I would say,

"Let not this report come betwixt my love and your Majesty."

[Cheers.] Having explained that, I have a hope on the part of myself and of my colleagues that all clouds may be swept away which lie between the bright sunshine of the full friendship of the Commissioners and ourselves [cheers]. I now pass away from the subject. Now about the Society's finance. We have not now, at the present moment, to discuss the position of our finance in detail. It will suffice to say that we are in a position which although grave is not irremediable. Not so, because by the terms of our lease we have yet to pay a certain rent to the Royal Commissioners, and if that rent be paid we will be free for several years to come. At the same time, the finances of the Society—I mean the income of the Society—does not meet its necessary expenditure by a long way. We must put our shoulder to the wheel as others have done, and devise some way of meeting the difficulty. The present Council has been in an unfortunate position since first it took office. They found themselves heirs to a very large amount of debt which ought to have been previously discharged. That debt amounted to £6300, to nearly £6400, and out of our limited income we have paid about £2000, so that our debt now stands at £4393. According to our Charter and bye-laws we ought to have no debt at all. The expenditure of the year and the income of the year ought to balance, and we ought to have nothing outstanding. You will agree with the Council when I say that when we find ourselves with a limited income, which a scientific society very frequently has, the position of having to discharge large amounts of debt places us in a very unfortunate position [hear, hear]. This year, I regret to say in the interest of horticulture, we have been obliged to diminish a number of prizes in order to curtail our expenditure, even in those legitimate prizes in which the Royal Horticultural Society ought to be liberal. With respect to the skating rink we no doubt divested a small portion of the funds from the legitimate pursuits of horticulture, but we felt that the income derived thereby would give a corresponding amount which could be devoted to the interests of scientific horticulture [a laugh]. Sir Coutts Lindsay reminds me that the sum to be paid was £1100. How happy could we be to get £1100 towards the cultivation of scientific horticulture! I must say that we come before you with the greatest possible confidence, and ask you to sanction what we have done. Another point upon that skating-rink question is that not one shilling of the Horticultural Society's money has been or would have been expended on that rink. The agreement we have concluded with Messrs. Prince is to the effect that the whole thing is to be done at their expense, that large privileges should be reserved for the Fellows of the Society; in fact, the whole agreement was favourable to the interests of the Society, and hence we feel no hesitation in recommending it for your adoption. I think, ladies and gentlemen, I need trouble you no further in introducing the Report. What alone remains for me to address you upon is our horticultural position. You will see in the Report before you that the Council have established a series of evening meetings for the discussion of horticulture. These meetings have already begun. I was going to refer to the black board behind me for illustration, but I see they have been effaced. However, I am told the meetings have been highly successful. I have just been reminded by Sir Alfred Slade of the fact that in the year 1875 our expenditure will be £2400 less than it was last year [hear, hear]. The very compendious statement which is in your hands will show you that the Council have most closely looked into the finances of the Society, and have tried to keep down the expenditure to the narrowest limit. The Lindley medal was last year struck, and it reflects credit upon the Society generally. I shall leave Sir Coutts Lindsay, who has taken so great an interest in the matter, to state the arrangements for the delivery of the medal, which is certainly the most important medal ever issued by the Society. Gentlemen, I have placed these matters before you, they are practical statements. It is quite unnecessary for me to indulge in oratorial flourishes, and I will sit down, recommending to you the adoption of the Report [cheers].

Mr. Bateman asked whether the adoption of the Report would be formally moved before criticism upon it was allowed? He, however, wished to say that he had listened to the Chairman's remarks with a great deal of interest and pleasure. He could hardly, nevertheless, go over the ground as daintily and delicately as the noble lord had done, just as if he was careering on

the polished surface of the skating rink [laughter]. He had no hostile feeling towards the Council, and he did not speak in a hostile spirit, and in referring to the Report he should confine himself to horticultural matters. In the second paragraph of the Report it is stated, "The Council have established a series of evening meetings for the discussion of horticulture. They are convinced that the comparatively small attendance at the ordinary meetings arises from the inconvenience of the hour rather than any indifference to them on the part of the Fellows, and they therefore consider that evening meetings may be considered of value both by the Fellows and others engaged in the pursuit of horticultural sciences." Now, here was a statement that there was a small attendance at the ordinary meetings, but it was the opinion of all horticulturists without exception that the meetings were for the cultivation of the science of horticulture. If the Chief Pontiff in the chair and his suffragans [laughter] thought the services of the Society were of such little moment, it was hardly to be expected that the outer world would pay them respect. It was said that all alterations were made in a non-horticultural direction, and that the Council went in for reductions. He went on to say that the local Fellows—the Kensingtonians—who lived in that neighbourhood did not express any special interest in horticultural matters. They had in their Society the town element and the country element. The town Fellows had the advantage of these gardens, and could attend all the Shows during the summer, whereas the country Fellows possessed the advantages which sprung from the distribution of new plants. He did not know how much more than £100 was the salary of an additional doorkeeper at Elvaston Place, but for his own part he should prefer a few pretty plants where entering by the old Orchid house to the new entrance, even though it be amongst the chalk and plaster effigies of some monsters of the deep [laughter]. It did appear to him that horticulture had fallen upon evil days [a laugh]. The vexed question of exhibitions, from which much of their bitterness sprung, was happily removed by the total failure and collapse of these exhibitions [laughter]. He could not see why the difficulties and antagonistic interests between the Commissioners and the local Fellows could not be arranged. The local Fellows only wanted their colonnade, and their band, and their promenade; but these were no horticultural elements whatever; but still, why should not people have these things as long as they were willing to pay for them? Why should not some arrangement be come to between the Royal Commissioners and local Fellows, in order that the latter might be provided with the accommodation they required? He felt perfectly certain that the Commissioners would not be slow to give the Fellows all the accommodation they required. He again said he could see no reason why an amicable arrangement should not be come to between the two bodies [hear, hear].

Mr. Walford said he had long taken a deep interest in the affairs of the Society. He had watched the changes which had taken place in the Council with the hope that they might go on from what was regarded as bad to something better. He was not sure they had been successful in that [hear, hear]. The Chairman, who put everything so pleasantly that it went against one's heart to say anything in an opposite direction, said he saw nothing in our present position at which they need be too much alarmed. However, if his own expenditure rapidly exceeded his income, and he found himself surrounded with debt, he should regard the position as a serious one indeed. He knew very well that the people who lived in the neighbourhood did not feel the same interest in horticulture that others did. He should not trespass on Sir Alfred Slade, as he saw now what he had perceived before, that while Fellows were addressing the chair, the members of the Council were holding a conversation [cries of hear, hear]. He should stop if he saw that conversation renewed [cheers and laughter]. The fact was that the local Fellows had made the Gardens a nursery very different from the sort of nursery it was originally intended to be [hear, hear]. The whole thing had not been successful, and the time had arrived when they ought to take some steps to have matters remedied. Would it not be prudent to go to the Commissioners in some form, and treat with them, if, as had been said, the existence of the Society depended upon the Commissioners? Why not place the whole case before them, and say that a number of gentlemen both in London and the country had joined the Society for the purpose of cultivating horticulture, but that horticultural purposes were being wiped away to make room for other purposes? He saw with great regret that the name of Mr. Smee, a practical horticulturist, had been withdrawn. When he saw the black board that day behind the Chairman he thought it was typical of the black condition of the Society [oh! and hear].

The Chairman.—I can only say in respect to what has just been said, that we have already approached the Commissioners on very many occasions, and that we have had several interviews with them. Mr. Walford appears to think that we have never been before the Commissioners, but it might have been gleaned from my speech that we have had many conversations and consultations. As to Mr. Smee, the rule has been to eliminate three names of members of Council who have given the least number of attendances. Mr. Smee was one of those; not that his interest in horticulture has at all suffered [hear, hear].

Mr. G. F. Wilson observed that for some time past Fellows, not local but horticultural ones, had been coming to him and saying, "Really there is so little being done for horticulture that I shall retire." He had heard that over and over again, and he had always said to those people, "A good time will come; don't be in a hurry." He thought that everything which was possible to be done to introduce a better state of things ought to be done, and done at once [cheers]. The Chairman had spoken of his fellow counsellors, and had spoken of the feelings of Englishmen. Now, he (Mr. Wilson) thought a charge might be brought against the Chairman and the Council, which was peculiarly objectionable to Englishmen, and that was a want of pluck [laughter]. He alluded by that remark to the country shows. They had heard nothing about them in the Report, although he had heard there was a rule for keeping up a sufficient guarantee fund. When they held a Show at Bury St. Edmunds it was an untried experiment; but what had been an untried experiment was now an ascertained success, and therefore he accused the Council of want of pluck in not entering into country shows.

Sir Henry Trino wished to say what he was bound to say on behalf of the Royal Commissioners. He wished to allude to himself respecting some advice he had given to the Commissioners lately, and he wished to say a few words upon the legal aspect of the question, having for twenty-four years taken a very deep interest in the Society. He might say he was no longer a Commissioner. As to the legality of the Council, when the revolution occurred, either for good or bad, the Commissioners sought the advice of the law officers of the Crown, and the latter said in their opinion the Council was illegal; consequently the Commissioners did not appoint the Expenses Committee, and thus they were brought to a deadlock. The Commissioners did not think it their duty to interfere, but to let matters alone. The Commissioners were perfectly willing that when the present or the next Council obtained an opinion from the law officers of the Crown in their favour to at once acknowledge them. The Commissioners never had the slightest hostile feeling towards the noblemen and gentlemen on the Council. The Commissioners never had the slightest feeling as to the revolution, but they were advised by the law officers of the Crown that the acts of the Council were illegal. The next question referred to the unhappy rink. He believed he was the most guilty of anybody, for when he was asked whether in his opinion it was legal to devote any portion of the Gardens to the purposes of the rink he pronounced it with the greatest confidence to be illegal. He told the Commissioners this—"It is illegal, and we cannot allow it." That was the whole history of the affair [loud cheers]. He was perfectly certain there was no more hostile feeling on the part of the Commissioners in refusing to sanction the rink than in any other matter. The Chairman had spoken of "hard words," but really the Commissioners had not spoken a hard word at all. The refusal to sanction the rink was not the result of a hostile spirit, but was simply a question of law. If ever there was a clear case of ordinary common sense and legal common sense it was this. It was really quite impossible for a body like the Commission, established for the promotion of science and art, to allow a Society which was established for the purpose of scientific horticulture to put up a skating rink. He now came to the intention of the Commissioners generally with respect to the Royal Horticultural Society. Whatever might have been the intentions of the Council, or whatever had been the speech of the Chairman, there appeared to have been something sore in their minds when the Report was written. He did not blame them for it, but he was authorised to say on behalf of the Commissioners that with regard to horticulture their intentions had never been in the remotest degree hostile [cheers]. The Commissioners considered themselves *quasi* partners in the promotion of horticulture, and it was their entire wish to promote the objects of horticulture [cheers]. On that point, therefore, whatever might have been said of the Commissioners, he was authorised to state that they never had any wish to do anything but to promote the objects of the Society in every possible way [cheers]. So far as regarded horticulture; and now as to the appropriation of land. It had been whispered that the Commissioners wanted to build upon the land. Now he was authorised to say that proposition had never been brought before them; he meant the proposition to build upon the Horticultural Gardens [cheers]. He was authorised to say such a proposition was never submitted to them; that they never for one moment thought of such a proposition; and that they never had any intention upon the subject [hear, hear]. It appeared to him that the arrangement or agreement of the Society with the Commissioners was drawn in a worse and more loose manner than any Act of Parliament he had ever seen [laughter]. He could say, on behalf of the Commissioners, that they never thought of determining the lease or of putting an end to the

Society in order to benefit themselves. Now, he wished to address a few words to his brother Fellows, the "Kensingtonians." With great deference to the noble Chairman, he could not but think, after reading the Report, that it did not bear a pleasant aspect as regarded the Commission. He had now nothing to do with the Commissioners—he might say in the language of Shakespeare, "Our withers are unwrung." Since, however, they were in a great measure dependant upon the Commission, he could not think it was wise to use terms which appeared to him, he would not say offensive, but assuredly not calculated to conciliate the Commissioners [hear, hear]. He was not finding fault with the Council. He thought that meeting ought to be good enough to authorise the Council to consider some of the sentences in the Report, and either to omit these sentences or recast them [hear, hear]. That would not be the slightest reflection upon the Council of the Society. He should also suggest that after reconsidering their Report the Council should take steps to establish their own legality [cheers].

Mr. Shirley Hibberd felt that there were so many unsatisfactory passages in the Report, and the Society appeared to be in such an unfortunate position, and the Council seemed to be so entirely destitute of a policy, that he should move that the Report be referred back to the Council for reconsideration. He would point out one clause in this Report which they could not allow to pass after what the Chairman said as to what had sprung up between the two authorities. It was impossible for them to be on friendly terms, or even on proper business terms, with Her Majesty's Commissioners, when they had in their Report a paragraph which told them that Her Majesty's Commissioners attempted to get the lease voided, so that the Society should be cast upon their mercy to receive some dole. The jar was upon the whole of the proceedings that day, and there appeared to be no other course open than to ask the Council to take the Report back, read it through, and consider it. He begged to move as an amendment that the Report be referred back to the Council for reconsideration.

Dr. Denny said, that considering the way in which the Chairman spoke, and the conciliatory way in which he mentioned Her Majesty's Commissioners, he (Dr. Denny) looked upon the Report as one of the least possible taste, and besides as being untrue [cries of oh! and hear]. They had no right to say that Her Majesty's Commissioners intended to take away from them their lease. They seemed to forget that if the lease was voided it was voided by themselves, and not by the Commissioners [hear, hear], and simply because they did not pay their rent to the Commissioners. The Report alleged what was not true; and as it was impossible for them to pass the Report as it stood, he had much pleasure in seconding the amendment moved by Mr. Shirley Hibberd. They were told they were to save £2500 next year. What was it to be saved out of? Was it not to be saved out of horticulture and out of shows? He did not find fault with South Kensington interests, for they had a right to be represented, but they had not a right to swamp every man. The President was a South Kensingtonian, the Vice-President was a South Kensingtonian [laughter] The Treasurer was a South Kensingtonian [more laughter], the Secretary was a South Kensingtonian, the Finance Committee were composed entirely of South Kensingtonians, and those outside South Kensington had not a voice in the matter at all [laughter]. He should like to know how they were going to pay their rent next year. If they were going to do it they ought to do it at once, and not leave it until Her Majesty's Commissioners chose to take proceedings against the Society. If they could not meet their expenditure they ought to take means to do so. It would be far better to propose to the wealthy Fellows of South Kensington to put their hands in their pockets and pay off the debentures. There were, say, a thousand very rich people in South Kensington, and it would only cost about £17 each to pay it all off [question, question]. Well, it would be better to do that than to go begging for what they had no right to, and nothing whatever to do with. They ought to know with regard to horticulture, what it was proposed to take off and what it was proposed to put on. Everything should be given up before they touched their staff. Had they a right to ask gentlemen whose time was valuable to give it to the Society, and to pay a considerable amount for railway fares, whilst the lawyer they employed would not do his work for nothing?

The Chairman—What are you alluding to?

Dr. Denny.—To your scientific staff.

The Chairman.—What do you say about the Council?

Dr. Denny.—I am alluding to your scientific staff.

The Chairman.—All the members of the Council are unpaid.

Dr. Denny.—I am quite aware you are unpaid. Next year when they would not be able to pay their rent, they would find horticulture would drop down to nothing.

Mr. Haughton congratulated the Chairman upon the speech he had made, the more so because it appeared to be a total reversal of the policy hitherto pursued, and because that at the last moment they had ceased to wage war against Her Majesty's Commissioners, and that practically a treaty of peace had been entered into [hear, and cheers.] He had hoped to have heard something more of the details of the treaty. He had hoped to have heard something more of the real state of the Society, and of the loss which had accrued to it in consequence of ill-advised warfare. On both points they had had nothing but promises. He was told they were to have a great reduction in expenditure next year, but how that reduction was to be effected they were not told. No estimate had been laid before them—nothing but a bare statement. He thought it must be obvious to everyone in that room that a reduction must be effected if they were not to forfeit their lease or be turned out of their Gardens. Mr. Haughton then went through the accounts submitted by the Council, and, having shown what he considered their bankrupt position, said that the Council should pause before they went to open war with the Commissioners, and should ascertain what their position really was, and see whether the Commissioners were acting rightly or wrongly. It was most desirable that amicable and friendly arrangements should be made with Her Majesty's Commissioners, and that when that was accomplished the result should be announced to the Fellows. He thought the concluding words in the Report ought to be struck out, and if they were not he should support the amendment.

Mr. Quilter, as a country member, was anxious to see some amicable arrangement come to, so as to end this continued strife [hear, hear]. He should be sorry to see the Gardens done away with, but there were many ways in which they could be helped, just as the Prince Consort wished to help them.

After a few words from Sir Alfred Slade, correcting some figures quoted by Mr. Haughton,

Mr. Edgar Bowring said he should speak as a member of the Royal Horticultural Society, and not as a member of the Royal Commission. He had listened with much pleasure to the speech of the Chairman, and with the Chairman he trusted that some amicable arrangement would be come to between the two bodies. He completely endorsed the remarks of Sir Henry Tring [cheers]. He did not think the Royal Commissioners would show any hostility whatever to the Council, but that, on the contrary, the desire of the Commissioners was to exhibit goodwill and friendship towards the Council [cheers]. He should support the amendment that the Report be sent back to the Council for reconsideration. He could only say that he hoped the result of the meeting would be that the present Council would be declared to be legally appointed. It was because of the opinion expressed by the law officers of the Crown that the Expenses Committee on the part of the Commissioners had not met; and he might say that the question of the skating rink was outside the functions of the Expenses Committee altogether.

The Chairman.—I asked the meeting not to sanction, but to discuss the question.

Mr. Bowring.—I should not have done so—I should have referred it to the Royal Commissioners. The Commissioners had full power under the Act. On the whole it seemed to him better to refer the Report back to the Council.

The Chairman.—It may save the time of the Fellows if I at once state the course the Council feel it their duty to pursue in this matter. I do, in the first place, entreat you to put a little trust in the Council which has carried on your affairs during the last two years. We have, with the greatest possible satisfaction, two announcements from the Commissioners—first, that it is not their intention to build on the Gardens. Now, we accept that as a most gratifying fact [cheers], and I will not state the evidence on which we thought otherwise. We are glad of it. Another gratifying fact is that the Royal Commissioners do not intend in any hostile sense to determine our lease, or to attempt to do so, and we accept that statement as frankly as it is given, and with very sincere delight. However, gentlemen, if this meeting were to come to a resolution that this Report was to be sent back, what would happen? The Council of course would resign. Speaking personally I could not fill a more thankless office; but, speaking as a member of the Society, and looking to the welfare of the Society, I should be sorry if at this moment you should turn out your Council [no, no]. I tell you the reason why. If you tell us to take back our Report, of course we resign; but it would be churlish, as this is the first time we have been met by the Royal Commissioners in a friendly spirit, to say we would not adjourn our meeting to look at our Report, so as to arrive at some solution which would be amicable [loud cheers]. If you put this amendment to the vote, we will be bound in honour, at this moment to stand by this Report, and you know it. I ask you not to put us in this embarrassing position.

Mr. Godson.—I move the adjournment of the debate to this day month.

Mr. Haughton.—I beg to second that.

Mr. Shirley Hibberd.—Then under the circumstances I shall withdraw my amendment with great pleasure [hear, hear].

The motion for adjournment to the second Tuesday in March was then put and carried, and a vote of thanks to the Chairman closed the protracted proceedings.

Report of the Council to the Annual General Meeting.

The Council, in presenting their Report for 1874-5 to the Fellows, have great pleasure in again commenting upon the magnificent displays which the Society's Shows have produced. The amendments introduced into the Schedule, together with the reduction in the number of the Shows, have both contributed to this result, and in no instance more remarkably than in the concluding Exhibition of the season, when the collection of fruits and Chrysanthemums transcended almost all similar collections of former years. The more purely scientific work of the Society has again been attended with success. The experiments made at Chiswick form, as usual, the subject of a supplementary Report. The meetings of the Scientific, Fruit, and Floral Committees have been well attended, and the work done considerable.

The Council have established a series of evening meetings for the discussion of horticulture. They are convinced that the comparatively small attendance at the ordinary meetings arises from the inconvenience of the hour rather than any indifference to them on the part of the Fellows, and they therefore consider that evening meetings may be considered of value both by the Fellows and others engaged in the pursuit of horticultural science.

In the course of the past summer the Council received an offer from Messrs. Prince, the proprietors of Prince's Club, of a large sum by way of rent for the privilege of constructing a skating rink in the Society's Gardens under certain conditions. Whilst considering this offer, the Council gave weight to the following points:—1, That the present expenditure of the Society cannot be maintained upon its present income, and that some increase would have to be made in the Fellows' subscriptions, or additional sources of income be provided. 2, That the large majority of the Fellows would prefer to give up the absolute use for a time of a small portion of their ground rather than pay an increased subscription. 3, That a great number of Fellows would be likely to accept the opportunity of subscribing to a very popular amusement brought to their own doors, and that many persons would be induced to become Fellows in order to obtain the privilege of so subscribing. 4, That Messrs. Prince proposed to erect the rink at their own cost; to reserve three days of the week for those Fellows who should subscribe to it; to conduct the rink in concert with the Society's officials; and to pay sums of money as rent, amounting on the average to £1100 a-year. The advantages thus offered appeared to the Council to be opposed by few countervailing objections, and they came to the conclusion that they ought not to let slip so admirable an opportunity of increasing the income of the Society. It is true the scheme had nothing to do with horticulture directly, but it would have been a great indirect benefit, tending to set more of the Society's funds at liberty for the direct advancement of horticultural science.

In this last respect the Council had before them the example of Her Majesty's Commissioners for the Exhibition of 1851, who have considered the sale on building leases of land which they had acquired for purposes connected with science and art a legitimate manner of advancing those interests. The mention of Her Majesty's Commissioners introduces the one difficulty which lay in the way of the skating rink. The Council had no power to sub-let any part of the ground held of the Commissioners, but Messrs. Prince were ready to accept of a "licenae to use" without a leaae. But in addition to this the Commissioners have power to prohibit any proceeding of the Society with regard to the Gardens which shall not be of a horticultural nature. The Council felt that to communicate with the Board of Management on this subject would be useless, seeing that the Board had declined to discuss with them the Society's affairs; but the earliest opportunity was taken of bringing the matter to the notice of the Commissioners at their meeting on December 11th. It was finally resolved to acquaint Messrs. Prince fully with the exact terms on which the Gardens are held, and if they were willing to proceed the Council would then undertake such arrangements as they were competent to make. Messrs. Prince, after examining the Society's documents, entered into an agreement and commenced operations. It was confidently expected that in view of the many difficulties which the Society had encountered in consequence of the onerous engagements originally made with the Commissioners, and in consideration of the many concessions made to them from time to time in support of the International Exhibitions, no interference would take place. Such non-interference would have been at least consistent with the expressions of amity towards the Society with which the refusals to co-operate with the Council had been accompanied. Accordingly, for the first four or five weeks no objection was offered. The officials of the Commission were well aware of what was in course of erection, and conversed about it to the Society's officials. Messrs. Prince spent a considerable sum in furthering the undertaking, when suddenly the Commissioners came to the conclusion that an interference was convenient, and intimated that they were about to file a bill in Chancery to test the legality of the Council and to litigate all disputed points with the Society. The Council having repeatedly received this threat for two years, and having taken the highest legal opinion as to its status and as to all other points in dispute, cannot feel any regret that the relations of the two bodies should be at length brought before the public. They are satisfied that not only will their own *bona fides* be vindicated, but that a public discussion will redound to the credit of the Society.

The Council have now to call the earnest attention of the Fellows to the state of the Society's finances. It has been impossible to make any serious reduction in the debt to which the Council called the attention of the Fellows in their last Report. Indeed, since the accession of the present Members to office, the Council have been called upon to pay debts previously ignored in the published accounts of the Society. Sir Trayton Drake advanced prior to 1860 £1000 to the Society at interest; no interest had been paid since 1864, and although the matter had been before 1873 brought to the Council's notice by legal proceedings, no settlement has been effected. The Council have succeeded in compromising this claim by a payment of £600. There was also a claim by Mr. Cooper of £105, which the Council have settled.

It has become evident to the Council, as already stated, that the ordinary revenue of the Society cannot support its expenditure. Several reductions have been made which will prevent any increase of liability in 1875;* but this course is looked upon by the Council as wholly unsatisfactory. The question as to whether the Society is to remain at South Kensington is brought into prominence by the necessity of paying rent to the Commissioners in 1876, so that the local Fellows (and neighbourhood) must now make up their minds definitely either to risk the loss of the Gardens at South Kensington or to subscribe more largely. The Council feel that any increased subscriptions ought fairly to fall upon those who use the Gardens most frequently, and to whom their loss would be most serious. Those Fellows who live at a distance and support the Society on account of its being the national representative of horticulture ought not, in the Council's opinion, to be further taxed for the maintenance of the South Kensington Gardens. To this end the Council are prepared to suggest a scheme for increasing the annual income of the Society should the above policy be accepted, and will call a special meeting for the purpose of submitting their scheme to the Fellows.

In conclusion, the Council feel it their duty to remind the Fellows that whatever opinion they may have as to the desirability of retaining the South Kensington Gardens, the Society is bound to do its utmost to maintain its lease, if only for its obligations to the Life Fellows, and, above all, to the debenture-holders. If Her Majesty's Commissioners should succeed in an attempt to get the lease avoided, the property would be released of its debt to the debenture-holders, who would thus lose the whole of their £50,000 originally advanced, or be obliged to accept such a dole as the charity of the Commissioners might induce them to offer.

Report of the Chiswick Board of Direction, February, 1875.

The Chiswick Board of Directors have to report that the operations in that establishment during the past year have been chiefly directed to the general maintenance of the garden, the experimental trials of vegetables and flowers, the supply of plants for the decoration of the gardens and conservatory at Kensington, and the provision of seeds and plants for distribution to the Fellows. As regards the latter, the new plan which has been adopted in lieu of the ballot, of allowing the Fellows to select a certain number of plants from a list provided for the purpose, has been found convenient to work, and, as they believe, has given greater satisfaction to the recipients.

During the year the garden has been supplied with water from the waterworks, which has proved a great advantage both as to convenience and economy of labour. The immediate cause of this supply being laid down was the failure, during the dry period with which we were visited last summer, of the wells upon which the water supply had formerly depended.

In the Floral Department the distributions to Fellows have consisted of 42,684 packets of flower seeds, 3643 plants selected from the distribution list by Fellows, and 428 packages of cuttings and bedding plants. The Garden at Kensington has been supplied from Chiswick with 13,936 plants for the decoration of the conservatory; 56,627 plants have been used in the summer bedding arrangements, 3164 plants in the bedding provided for the spring season, and 8487 plants for autumn bedding.

The comparative trials of new flowers which took place last year, were devoted to Pelargoniums and bedding Pansies, and reports of the results, drawn up by the Floral Director, will be found in the last number of the Society's Journal. The number of varieties of Pelargoniums planted out for these experimental purposes was 293, while eighty-three sorts, chiefly consisting of

* In particular, reductions have been made in the staff; prizes will only be offered at the most important Shows, those in May, June, July 7th and 21st, and October. Other extensive reductions have been temporarily sanctioned.

the rose-pink varieties, were grown in pots under glass, in order to ascertain which varieties were the best adapted for that mode of cultivation. Amongst the former nine new certificates were granted, and in twenty-four cases the previous certificates were confirmed, on a comparison of the newer with some of the best older varieties. In the pot trial six new certificates were awarded, and the previously granted certificates were confirmed in the case of five others.

In the case of bedding Pansies, 139 varieties (some of them of the fancy class) were received and planted. The Floral Committee awarded eleven certificates, and suggested that the best varieties should be grown again and examined earlier in the season. In accordance with this suggestion, Mr. Barron is preparing to plant out an entire bed of each of the selected varieties.

So far as this year's limited means will allow, these interesting trials will be continued as heretofore.

The trials which were made during the past season in the garden at Chiswick, were a continuation of the examination of the Potatoes which was commenced last year, and an investigation of complete collections of Broad Beans, Kidney Beans and Celeries. Of Potatoes, 158 varieties were dealt with which had not been included in the trial of the previous season, and of these five received first-class certificates. In the trial of Broad Beans there were forty-seven varieties, of which a full report will be found in the Society's Journal; but on account of the dry cold season the Kidney Beans, of which 113 varieties were sown, proved a failure, and it was determined not to proceed with any examination of them till another year, when a second attempt will be made. The trial of Celeries was a very successful one. Fifty reputed sorts were sown, and these were reduced after careful comparison to eighteen, of which six were distinct red varieties, and twelve distinct white.

The vegetable trials which are contemplated for 1875 are Kidney Beans and Onions.

The subject most worthy of remark in relation to fruits which have come before the Board this season are a set of seedling Vines raised by crossing Black Monukka and Black Hamburgh, with the view of obtaining a seedless variety with the quality of the Black Hamburgh—the result of this experiment will be found in the Journal—and the other is the fruiting of the Pommier de Paradis for the first time in this country. The result of this is to determine the distinct individuality of this variety, and to prove that it is not only valuable as a dwarfing stock, but that its fruit is one of great excellence as a dessert variety.

The distributions that have been made are as follows:—430 cuttings of Vines, 65 of Figs, 258 of Apples, and 119 of Pears.

M. J. BERKELEY.
R. HOGG.
T. MOORE.

STATEMENT OF INCOME AND EXPENDITURE for 1874 (prepared in accordance with Bye-law 117).

INCOME.

	£	s.	d.	£	s.	d.
Life Compositions effected during year 1874 (6 in number)				210	0	0
Entrance Fees of New Fellows (83 in number)	174	6	0			
" " unpaid at 31st Dec., 1874	8	8	0			
				182	14	0
Annual Subscriptions of Fellows	7,556	17	0			
" " unpaid at 31st Dec., 1874	224	14	0			
				7,781	11	0
Flower Show Receipts				698	19	3
Saturday Promenade Receipts				278	1	0
Daily Admissions to Gardens				318	6	6
Rent of Stalls in Entrance				218	13	6
Sale of Chiswick Garden Produce				195	13	0
Interest on Davis' Bequest				6	0	9
Advertisements in Prize Schedule				57	15	0
Packing Charges for Flowers and Seeds				14	15	9
Sale of Books				2	18	3
Miscellaneous Receipts				89	4	5
Exhibition Commissioners for Lease of Arcades, &c.				768	17	6
Balance				795	13	3
Total				£11,673	3	2

EXPENDITURE.

	£	s.	d.	£	s.	d.
Establishment:—						
Salaries (including Accountant)	644	16	2			
Wages	346	5	4			
Printing, Stationery, and Almanacs	439	18	2			
Postages	100	7	2			
Gas	26	4	11			
Law Expenses	148	13	2			
Miscellaneous and Petty Cash	62	6	3			
				1,768	11	2
Special Expenses relating to Horticulture:—						
Journal of the Society	79	12	11			
Botanical Professors' Fees	150	0	0			
Botanical Advisers' Fees	200	0	0			
Pomological Directors' Fees	95	16	6			
Floral Directors' Fees	74	17	0			
Fruit, Floral, and Scientific Committees' Expenses	76	8	11			
Repair of Tents	40	9	3			
Foreign Importations	3	15	0			
				720	19	7
Kensington:—						
Labour, Works, Material, Repairs, Plants, &c.	1,653	5	9			
Rates, Taxes, and Insurance	910	13	1			
Amount paid for Water	102	15	9			
Saturday's Bands (and Bank Holidays)	350	0	0			
Newspapers, &c., in Reading Room	20	14	1			
Rhododendron Exhibition	40	8	7			
				3,077	17	3
Chiswick:—						
Labour, Works, Material, Repairs, Plants, &c.	1,886	9	3			
Rent, Rates, Taxes, and Insurances	205	6	1			
				2,091	15	4
Flower Shows and Exhibitions:—						
Superintendent of Shows—Salary	100	0	0			
Advertising Shows	227	0	6			
Prizes and Medals	1,450	8	2			
Bands on Show Days	70	0	0			
Labour, &c., at Shows	139	19	9			
Judges' Fees at Shows	37	16	0			
Gardeners' Breakfasts, Police, &c., at Shows	26	8	10			
				2,051	13	3
Interest for the year on Society's Debentures				1,962	6	7
Total				£11,673	8	2

London, 1st February, 1875.

HENRY LIGGINS, *Auditor.*

AT the present crisis of the Royal Horticultural Society's affairs, I conceive the policy of the horticultural Fellows is to request our Council to open at once communications with Her Majesty's Commissioners with a view of transferring to them the Gardens, under satisfactory arrangements for our debenture-holders, the life and local Fellows, with a *locus standi* there for our shows and meetings. We have but to be united, act with vigour and with determination, and the thing is done.—JOHN DENNY.

[In all the recommendations specified by Dr. Denny we fully concur. It is the only course to restore efficiency and independent action to the Society, and to save it from utter annihilation. Its history for the last ten years has been one of disquiet and conflict, such as to give rise to painful apprehension for the future.—EDS.]

JOTTINGS ON LAST YEAR'S GARDENING.

No. 3.

ENDIVE.—This suffered from drought, and was not so good as in 1873. Improved Round-leaved Batavian and Green Curled are grown and answer well. Endive was first used (it is not used when Lettuces are good) December 15th, in 1873; November 1st, and up to March 19th, 1874. Digswell Prize is a fine curled, and Fraser's Broad-leaved Batavian large and good.

KOHL RABI is grown—the Early Green and Purple Vienna, but find no favour. They should not be sown too early, or the plants run. May is soon enough. A foot distance every way is sufficient for them, and sown where to stand.

LEEKS.—Ayton Castle Giant is large and fine, and so is Musselburgh. Leeks are best sown where they are to remain without transplanting, as is usual. We sow in rows a foot apart, thin to 3 inches, and draw every other plant as required for use, which gives room to those remaining, and they become large. The first we used July 17th; and last (of 1873 crop), June 11th, 1874.

LETTUCE.—I had last year of Cabbage, All, the Year Round, Grand Admiral, Neapolitan, Blonde de Berlin Commodore Nutt, Gem, and for winter work in frames Commodore Nutt already mentioned, as also All the Year Round, Hardy White Dutch, Lee's Immense Hardy Green (which is said to be the same as All the Year Round, but as I have it is distinct), and Stanstead Park. Cos—Alexandra White, Sutton's Superb White, Paris White, Hicks's Hardy White, Brown Bath (black seed), and Bath Sugarloaf, also Laitue Verte Maraschere, Laitue Blanche Maraschere—the one Spotted Cos, very pretty in leaf, and the other Paris White. Laitue Rourse and Laitue Petit Noire, both Cabbage kinds, and the last has a distautly spotted leaf, and is the same as Stanstead Park, and does well in frames, not being so liable to suffer damp as many. Of these kinds outdoors, in Cabbage kinds Neapolitan is the best for crispness, then Gem, which may be described as a golden Neapolitan or Malta. All the Year Round is very much earlier; and earlier still is Commodore Nutt, a small close-hearting kind. Blonde de Berlin is a close-hearting kind, bright golden

green externally, having a good close white heart. Grand Admiral coming in early, and having a good large white heart. The Spotted Cos is, as before stated, very pretty, and that is all. Paris White, Alexandra, and Suttons' Superb were fine, the two last fine stocks of the first; Hicks's Hardy White is a fine kind for late summer and spring use, also first sowings in spring, it being hardier than Paris White, but very similar to that kind. Brown Bath Cos is hardier than Hicks's, and is good in early summer, and continues a long time before running to seed. Its colour, no matter how well blanched, is objected to; and the Bath Sugarloaf, although having narrow tapering leaves, forms fine conical hearts and needs no tying. It is not so hardy as Hicks's or Brown Bath (black seed). The best Cos, Paris White for summer; and winter, Hicks's Hardy White. The best Cabbage, Neapolitan for summer; for winter, Stanstead Park. I have given up transplanting Lettuces, only it has sometimes to be resorted to, as the ground for them is not always clear at sowing time. Good rich well-manured soil is wanted well dug, and then made firm as for Onions. The seed is put-in in drills a foot apart, the seed lightly covered, and the plants thinned to 9 inches distance apart, and in cutting every other plant taken out. They grow less flabby in firm than light soil, have firmer closer hearts, and stand drought better, and escape frost in winter when those in loose soil perish. In frames they are sown in drills about 6 inches apart; every other row is a Cabbage kind, and the other Cos. The lights are not used until frost. The Cos kinds are Hicks's Hardy White and Bath Sugarloaf, and the Cabbage between the rows Commodore Nutt, All the Year Round, and Stanstead Park. They are thinned to 6 inches distance apart, but Commodore Nutt to 4 inches. This kind comes in first, and All the Year Round and Stanstead Park succeed, leaving the Cos plenty of room, and every other plant of Cos is cut, leaving the others, which are of course largest and best, and the salads keep on improving with the season. Two lots are sown in frames, narrow ones 4 feet wide, and 60 feet long each, one in early August, and the other at the end or early September. The frames are removed from the last so soon in March or after as the weather determines. Lettuces must have hearts and white before they are used, but Commodore might be cut now (January 20th), but will not be until March. The first were cut March 23rd, the last November 16th.

Curled Mallow is noted because its leaves are so fine for garnishing, infinitely superior to Vine leaves. Those worried for Vine leaves, and not having any without injuring the Vines, may use Sycamore leaves; they are very similar; but don't say what they are if it can be helped. Cooks and housekeepers know no substitutes, but have many fancies, which it is not always wise to ignore.

Mushroom.—In the fields this esteemed vegetable was tolerably plentiful in August, but very scarce after that month. Our plan is to depend upon those in the Mushroom house from October to July, and in summer upon the fields for a supply, which usually yield abundantly.

Onion.—This crop suffered from the drought, and the bulbs were smaller than usual, but have kept well. Reading is a capital kind for early winter use, and for the same purpose Danver's Yellow, and White Spanish or Portugal, Deptford or Strasburg, Bedfordshire Champion, and Brown Globe are good keeping Onions. The best for keeping is James's Keeping, excepting Blood Red, which is the longest keeper of all; James's Keeping is a very desirable kind. The autumn-sown mildewed, and were not good. Queen I think nothing of; the old Silver-skinned is superior to it. Small Onions meet with no favour from cooks, and for pickling Two-bladed is the best. Giant Rocca, if the seed be not better than I had, means failure, and Giant Madeira is simply a Globe Tripoli. The Flat Italian and Globe Tripoli with White Lisbon are as good as any for autumn sowing. Improved Reading (Suttons') was the best of the white summer kinds.

Parsley.—To have this is no easy matter in winter. The best plan is to sow largely and in April, cutting over in July what is wanted for winter use, and it will be fine by autumn. Two rows about 100 yards long are sufficient for the demand upon us. Veitch's Curled is the finest I know.

Parsnip is not much used in most cases, but must be had. Hollow-crowned Improved is unquestionably superior. It does best in rich, deep, light, moist soil, and is a very useful and profitable variety.

Peas.—These were, as regards the earliest and latest crops, good, but those coming-in in August were much infested with mildew. The sorts grown were Ringleader, the earliest, but not last year, Blue Peter, a dwarf blue kind, having the protection or shelter of a south wall, being gathered before Ringleader. Emerald Gem was in at the same time as Ringleader, and before First and Best, but this Pea is the best cropping early Pea known. Alpha (Laxton's) succeeds First and Best, which is a blue Pea with large well-filled pods. Advancer, green-wrinkled, follows Alpha, and is a good cropper and good flavour. Hundredfold is a green Marrow of the Prizetaker class, and follows Advancer, as does Best of All, one of the best-cropping and finest-flavoured of Peas. The same raiser's Dwarf Prolific (Prince of Wales) and Wonderful, both white-wrinkled, being good croppers and fine-flavoured. Jersey Hero is also a fine Pea of the Veitch's Perfection type, a little earlier, as is also Best of All, but both are earlier than Veitch's Perfection, both very good croppers, and has unquestionably the finest flavour of any Pea in cultivation. All the Peas of medium height with the most delicious flavour are of the Veitch's Perfection class, and they do not surpass it in that or any respect, only some are a little forwarder and others a little later in coming into use than that variety. Premier (McLean's) is a green-wrinkled Marrow, and a grand one for late crops. G. F. Wilson was very free-cropping, long-continued, and most excellent in quality. It is a wrinkled Pea of high excellence. None of the preceding are large growers, not exceeding 5 feet in height; and of this class is Champion of England, a Pea I have thought highly of hitherto, but last year it was, though very productive, poor in quality. Those do not require tall stakes, but we had others that do, as Emperor of the Marrows, Berkshire Challenge, and Ne Plus Ultra. The two first are larger in pod and pea than Ne Plus Ultra, and of excellent quality, but Ne Plus Ultra is later—in fact, the best late Pea I know. I am mindful of what Mr. Wright told us respecting another late kind, but I have not seen or grown it. These tall Peas I do not like; they want tree-like stakes, and are so liable to be blown about and broken by wind and rain, which in hilly districts do great harm in late summer and autumn. There is, however, one advantage they have over the dwarf kinds in the pods being produced at a greater height from the ground; they are more out of the reach of pheasants, which are very frequent visitors of our late Pea quarters.

Of the recently-introduced Peas I have not grown many. Superlative has an immense pod, but is not a great cropper, nor has any merit in flavour. Fillbasket (Laxton) is a wonder of fertility—the pods long, curved, closely filled, and the peas of good flavour; as a general-crop Pea and for market purposes it will be in great demand. The greatest novelty I ever saw or heard of is Suttons' Giant Emerald Marrow. It is of strong robust habit; and whilst Jersey Hero, Fillbasket, G. F. Wilson, Hundredfold, Best of All, Superlative, Champion of England, Berkshire Challenge, and two edible-podded kinds upon the same plot of ground were attacked by mildew, this kind was not infested. It is of the brightest green in its foliage as Emerald Gem, without glaucescence, and has the leaves white-splashed or spotted. The pods are large, produced in pairs, containing eight to ten large peas, green when cooked, and exquisite in flavour. In our rich soil it attained to a height of 7 feet. Good as this was, it yields in my opinion in quality to Duchess of Edinburgh (the Royal Dukes and Duchesses are greatly, almost exclusively, patronised), which in flavour surpassed all others, being very tender and sweet. It attained a height of 6 feet, was very prolific, the pods being large and well filled, generally eight or nine peas in a pod, straight or nearly so, and is very similar to Ne Plus Ultra. It, however, is distinct from that variety; the pods are better filled, and is not so tall nor so late, and it withstands drought well, the peas not being so soon hard as many varieties, and is on that account a good kind for hot light soils. We had also McLean's Little Gem, which will not be grown again, and three other kinds which did not do well. The first dish outdoors was had June 22nd; last, November 14th. In 1873 the first July 7th; and last, November 7th.—G. Abbey.

(To be continued.)

MR. THOMAS BRAGG.

Those, who like myself can look back on thirty or forty years of horticultural lore, can remember when the name of the aged veteran (who, like so many others, has succumbed to the vicissitudes of this trying winter) was a household word. If we take the years 1840 to 1850, such flowers as Beauty

of the Plain, Springfield Rival, Topaz, Essex Rival, and other Dahlias which have long since disappeared were considered the acme of perfection, beyond which it was impossible to go. Mr. Bragg was a successful raiser and exhibitor. Pinks, Panies, and Hollyhocks were amongst the things he successfully cultivated. Of late years he has been far out-distanced by other growers, but in those days he was a well-known and constant visitor at all our horticultural shows in the neighbourhood of London. He was one of the old school of florists, of whom very few are now left.—D., *Deal.*

LUNARIA BIENNIS.

This popular old garden plant is of German origin, and has been cultivated for upwards of three centuries in British gardens. So perfectly has it adapted itself to our island, so spontaneous is its upspringing in congenial sites, and so persistent is its clinging to favourite nooks, that we are apt to regard it as born to the soil on which it has prospered so long, and to claim it as a native plant of our native land. It is commonly known by its homely name of Honesty, or Moonwort, in reference to its peculiarly flattened seed-vessels, which in themselves are no insignificant ornaments for room-decoration, and are especially attractive to those who find pleasure in the curious forms of plant-development. Such examples of quiet and quaint decoration, as distinguished from gay colouring, would seem to be pushing their claims on the taste of the times; and the best proof that even this old plant has intrinsic merit about it is the extraordinary period of probation (if such a term is permissible) it has undergone, and still—yes, still—evokes terms of admiration when dancing in the sunshine of a bright May morning, a shimmering purple sea; or when the quaking shivering seed-stems are viewed as a mid-winter household ornament, white and pure within almost as the fleecy snow without.

To these attractive merits of this old and common plant must be added this great advantage, that it is within the means of everyone to enjoy who owns a garden. So accommodating is it, that it is not at all particular as to soil or site. Either amongst roots or stones, in sun or in shade, in rich soil or poor, the Honesty will grow, and bloom, and enliven any plot, or garden, or corner—aye, or wood, where it is encouraged or permitted to establish itself.

We have written "wood," and the association is suggestive. Because it will flourish there it will succeed well and is one of the best plants that can be encouraged to brighten-up the home-surroundings—the borderland as we may term it—of garden and copse. In how many places is the ground where garden merges into wood the most uninviting, we had almost written abandoned, of all parts of the demesne? Look round and see. You behold, no doubt, native plants whose simple charms cannot be overlooked, and you see also rubbish—Nettles, Thistles, Docks. That is unquestionably the fact, and it is as well to admit it on the principle that hidden sores seldom heal freely. Now in this particular wood or garden environs the Honesty is the plant of plants to change the scene from an aspect of neglect to a position of enjoyment. In the place of rank weeds will spring up a bright cheerful flower, requiring, when once established, little more attention than the weeds themselves receive. In thousands of such wildernesses the plant, when just once planted and tended into bloom, will perpetuate itself by its own inherent force of reproduction. In such places use the Honesty by the hundred or thousand as required, and many a cheerless walk and dingy drive will smile with beauty and be made cheerful, as that period of the year should be.

But besides occupying the border laud mentioned, the Lunaria may be admitted into the garden proper. "What! a common plant like that have a place in the garden! It may do for the cottagers' corner, or to hide an unsightly background; but a garden!" Does such a thought as that really arise? Well, let the corner be made attractive, and the cottagers' home be made brighter, and then the old Honesty will have done something, and something withal worth the doing.

But it will do more than this—has done, and will do more. It has played its part in ducal parterres, and played it well. In spring gardening, which is so delightful, it is adapted for a telling mass of a colour just then not at all too abundant. For lines or centreing, for distant effect especially, it is capable of doing much to fill-in a coveted floral picture.

For this purpose it may be produced at almost any height required. If it is wanted to create a fine bold mass 4 feet high, give it rich soil, and stakes to support it; if wanted one-fourth of that height, plant in soil less rich, and peg down. So remarkably tractable is the old plant, either as to altitude and adaptability to site, that we may almost do as we like with it.

For massing and garden purposes the purple variety is generally most suitable used alone, but for woodland and wilderness and approaches thereto, the white one mixed-in adds an air of sprightliness to the scene, which would otherwise, by the natural greenery prevailing, be somewhat too heavy and sombre. Where sub-tropical gardening is in question, and plants used which cannot safely be put out until the

Fig. 30.—Lunaria biennis.

middle of June, this plant comes in as a useful ante-decorator, occupying the ground until just that time and taking off its blankness. For that purpose it is quite suited and is used, but its home is to be found in less imposing sites, to lighten-up the shrubbery and brighten dull approaches. It is at home with the cottager, and with the gardening-under-difficulties amateur, and will serve each well in return for anything like fair treatment.

As to propagation. Although it may be increased by division, it being occasionally perennial, it is altogether more easy to take it as it is, a biennial, and raise it by seed annually. If stout early-blooming plants are required, sow in drills at the end of April, and transplant in nursery beds after the manner of Cabbages, in rows 18 inches apart. Each plant will then have room to develope itself and be of hardy constitution, and such as scarcely any winter will harm. These plants if finally planted in the autumn will, under a mild spring, commence to flower at the end of March and continue two months. Smaller plants, if such are required in quantity

for semi-woodland decoration, may be had by sowing in June and transplanting less thinly, to be again put-in expeditiously with the spade in the hope of their continuing, as they often will, to haunt their home for many after-years with little or no assistance.

Because we look upon this plant as a very old friend, and, as such, possesses many good qualities with very little fuss attached, we do not hesitate to aid it from the comparative obscurity in which it has too long been suffered to continue.

CORDYLINE INDIVISA—SNOW'S WINTER WHITE BROCCOLI—MEALY BUG.

I FANCY the plant known to "R. P." (page 93) as Cordyline indivisa is not what is generally known by that name, and consequently his testimony to the hardiness of that particular kind is not so valuable as it would appear to be; but Cordylines are all handsome, scarcely inferior to Palms for their graceful habit, and any of them that prove to be sufficiently hardy for planting as specimens on lawns, or by the side of walks in semi-natural pleasure grounds, will be very welcome. The plant I know as C. indivisa has leaves 2 inches or more in width, with conspicuous red veins. The testimony I can offer will go a long way to prove the hardiness of it, but it is not quite conclusive. It has stood in a pot, not plunged or covered in any way, on the north side of a wall since midsummer to the present time (February 5th), apparently uninjured. Standing in a pot above ground its roots as well as its top would be exposed to the frost, and we had 25° December 31st. It had very little sun to ripen it, as from its position the sun could only reach it a little in the evening during the summer months. But on the other hand it is in a comparatively small pot, and did not make much growth, and its position is a sheltered one. I have no room for it indoors, and intend planting it out when time permits. Another Cordyline, which I take to be C. australis, has stood outside four years, and is a very handsome object. Is not the plant described by "R. P." Cordyline Veitchii?

Either Mr. G. Abbey has not got the true Snow's Winter White Broccoli or his cultivation differs materially from mine. I consider Snow's Winter White Broccoli, as supplied guaranteed by Messrs. Veitch, the most useful vegetable in the kitchen garden. Sown here in April and May it comes into use in November, and with management lasts till February, when it is followed by Cooling's Matchless. It is not so hardy as some kinds—it requires protection. No Broccoli that I am acquainted with will, when the head is formed, bear 25° frost; yet I had some of the variety in question, with heads as large as teacups, merely covered with snow during the late severe weather, that were perfectly uninjured. Most of the crop, however, had been taken up and replanted in pits. I have seen many varieties grown under the name of Snow's, most of them good, but still not the true kind. It is very difficult to save seed of this variety from its habit of turning-in at midwinter, and consequently it is always dear and scarce. Even the Messrs. Veitch have or had another stock besides the guaranteed one.

I am afraid "H.," who gives advice about getting rid of mealy bug off Vines by means of a spoke brush and clear water, can never have had much to do with that terrible pest. I do not recommend peeling bark off Vines, and had almost forgotten that such a practice existed till reminded by Mr. Wright in his excellent articles; but if I had mealy bug on the Vines I should certainly pull off the loose bark and then wash, not with pure water, but with hot soapsuds. Mealy bug has a great dislike to soft soap; it is within the bounds of possibility to exterminate it by this means, but it is extremely difficult. The soap must be kept off the glass, or at least not allowed to remain on.—WM. TAYLOR.

OVERPOTTING GERANIUMS.

As the season is now at hand for potting I wish to say a few words against overpotting Zonal Geraniums for greenhouse decoration. It is very well if you want to grow them for exhibition to give large shifts, but not without; they never throw up a quantity of bloom, but all leaves and strong growth, which makes your greenhouse look very green through the summer. Now, if you want abundance of flower shake all the old soil from the roots, and pot them in clean pots, with three parts loam, two parts leaf mould, and a little silver sand, in small pots, according to the size of the plant. When the pots are full of roots then feed them with liquid manure, but clear water given at first, and place them on a shelf near the glass.—WILLIAM DODGSON.

TRANSPLANTING VINES.

I AM delighted to hear of Mr. Blackburn's success (page 72) in Vine-growing. His is a striking instance of what may be done in the work of renovation when intelligently performed. Mr. Blackburn's Vines, it may be remembered, were twenty years old in 1872; their growth was weakly, and their produce altogether unsatisfactory. He decided to remove the house and the Vines too. How many, or how few, who, when making a new border on a new site, would not have had new Vines also? Who but Mr. Blackburn would have preferred the removal of Vines twenty years old confessedly in a miserable state, to the planting of healthy young canes, which would have been in accordance with good practice and sound prudence? Yet he deliberately pinned his faith on his old friends, and they have not deceived him.

His experience is very valuable, and is another instance of the sound lessons which can be, and are frequently, given by amateur cultivators on the different subjects to which they give attention. The Vines in question were removed in November, 1872, but in the February preceding (admittedly too late, as proved by excessive bleeding) were each cut down to within a foot of the surface of the ground. That was a bold proceeding on the part of one who had had no similar practice to guide him, the stems being cut where there were no visible eyes to form new canes; yet canes followed the same season, of vastly superior growth to that of the years preceding—in fact the growth, it seems, was of extraordinary vigour. These old cut-backs were replanted in a border "half a yard deep of good, kindly, but rather light loam, without a particle of manure or dressing of any kind; this border covered with stable manure, never to be dug, but the Vines to be fed by repeated top-dressings." Such is the mode of culture adopted in 1872. We now have the results of it in 1874. The two are worthy of being joined together. "Vines all that could be desired, vigorous growth, a sufficient number of moderately-sized bunches, berries as fine as ever seen by cultivator under same circumstances, in colour, bloom, and condition scarcely to be surpassed; structure unheated." That is what Vines will do—have done, under common-sense practice. Here is no extravagant outlay in border, no technicality, no elaborate structural aid, no artificial heat, but plenty of Grapes.

I have had—everybody has had, abundance of proof that good, useful, serviceable Grapes are producible—fruit fitted for a nobleman's table—by simple means. Give a Vine fair play, and in nine cases out of ten good Grapes will follow; yet there are the tenths where they will not come at the call of gardeners whose experience and success in other branches entitle them to respect, and, it must be added, sympathy. Nothing is more disheartening than for an able man to struggle to produce Grapes, and who yet fails, while others, without any seeming trouble, have them, as it were, at their bidding. There is nothing for it but to go on chronicling successes with the means producing them, and, peradventure, some missing link may be picked up by those who struggle, but struggle in vain, to produce good fruit.

Now, in the case of Mr. Blackburn's Grapes we must not lose sight of the cutting-down process. That was undoubtedly an important item in the account of success. Had his soil, site, and general system of culture been exactly applied to Vines lifted without being cut down, he would not now rejoice in such Grapes which he has just cause to be proud of. But another question arises, What would those cut-down Vines have done if they had not been removed? Previous to the heading they were confessedly worthless, making weakly wood and small sickly foliage. Of course, no fruit could follow under such circumstances; but after the heading-down, in the same border and house they made splendid canes, which duly ripened. Would not those canes have produced good Grapes if the Vines had not been removed? I venture to assert that they would have given Grapes as superior to those previous to the heading as were the canes and foliage. But why should this be so? To a great extent it is due to the new, free, unobstructed sap-passages which the young growth has provided. In the old canes the sap vessels were restricted and tortuous. The natural result of that is small wood, small foliage, and small fruit. Thus, Mr. Blackburn's Grapes by the mere pro-

cess of heading-down, irrespective of removal and change of soil, teach a lesson of some importance.

It is certain that numerous instances exist of weakly, stubborn, old Vines, but which, however, cannot be transferred to a new site and fresh soil. In such a case much good may accrue by cutting-down alone, when, as in the case in question, the old stock will push-up fresh fine canes. Every alternate Vine so cut down, and heavy border-dressings of rich manure, and with occasional soakings of guano water at the rate of 1 to 2 ozs. per gallon, would very soon work a decided improvement in many Vines which are apparently worn out. How many examples are there in the country in which, when old Vines have been uprooted, one solitary individual has been left, just for "old acquaintance sake," and this old friend has for years yielded as good, often better, than any Vine in the house! This old remnant, however, like Mr. Blackburn's, had the benefit of fresh soil. This should always be afforded if at all possible; it is only where it is impossible that the cutting-down alone is recommended as a means to procure Grapes on Vines previously barren.

Proceeding to Mr. Blackburn's request as to the formation of a *beau ideal* border, my reply is, I have no idealistic standard to set up to be worked by in all places and under varying circumstances. Any inflexible recipe, however good it might be in itself, would be calculated to mislead. A thorough knowledge of local circumstances, such as nature of soil, its retentiveness of moisture or otherwise; subsoil, its relative percolative power; natural district drainage and rainfall;—these are important incidences of which it is necessary to have a thorough knowledge, and there would be then no guesswork in border-formation. But Mr. Blackburn has a good border, at least that is what his Grapes say, and how simple it is! yet if I may venture a remark, it is not the border in itself that has such a Grape-producing power, but that it is pre-eminently the management of it in which lies the secret of success. Such a border of 18 inches deep only, and this rather light loam with no intermixture, must be managed—it must have attention, or in a very few years, unless the surrounding soil is naturally adapted to Vine wants, the Grapes would lack both size and quality. The top-dressings must be continued and an occasional change of food given. There must be loam additions, or a mass of humus will be created, which alone will fail to do the required work. Next autumn, if he dare do so, let him carefully point-off 2 inches of the surface if that can be done without the slightest root-injury—not without, and replace with 3 inches of sound loam (not light fibry stuff, as the manure will keep the bulk light enough), with 2 cwt. of inch bones per cartload of loam. Let this dressing alternate with the manure-coverings, and then with intelligent top-treatment no one can say how long the Vines will continue in vigour.

Large bunches and large berries by no means go together, as Mr. Blackburn supposes. Quite as often just the reverse is the case, and a pound or two-pound bunch with fine and perfectly finished berries, such as our friend has produced, are far more satisfactory to the consumer and creditable to the producer than larger bunches with berries destitute of colour, size, and bloom. Mr. Blackburn is on the royal road to large berries; he has only to crop lightly, thin freely, and if his border is perfectly drained or subsoil porous, water with liquid manure after stoning; keep the foliage thin, clean, and healthy; keep insects down by a genial atmosphere impregnated with ammonia from guano sprinklings, and then large berries will follow.

These jottings, it is believed, will be more really serviceable than a mere tabulated composition for any ideal border, which, by the way, I think I did not promise to supply; but I will now promise what is better—viz., at a convenient opportunity draw attention to some of the largest Grapes that have ever been grown, stating the governing conditions, and I venture to predict a surprise to somebody.—J. Wright.

VARIEGATED KALES FOR DECORATION.

In writing of these I do not pretend to have anything new to say, but rather to call attention to them as useful aids in the winter, when flowers, especially in small or medium-sized gardens, are scarce. This being the time when the majority of people who have gardens order their vegetable seeds, a little of the Variegated Kale seed could be ordered at the same time, as most respectable nurserymen keep good strains. The purpose for which they are here used is for the decoration of the dinner table, which purpose they answer capitally, the colours showing much better by artificial light than during the day, varying as they do from white to deep crimson. These, with a very few flowers added, such as Chrysanthemums, &c., sprays of Solanum Capsicastrum with two or three berries on each spray, form a lively contrast to the White Kale, with a few fronds of Adiantum cuneatum or other airy-looking Ferns over them; also a few dried Grasses might be mixed among them. Stands made of these materials were much admired here during the past winter.

I will add that the Variegated Kale is a very good vegetable cooked in the usual way.—G. H. Cooke, *The Gardens, Penlarth, Towyn, N.W.*

OUR AJUGAS.

All flowering plants are interesting in their season; among these we have the family of Ajuga, not a very numerous one, but none the less interesting. I think no admirer of our beautiful flowers can pass through our meadows during the early summer months without noticing the common Bugle, as it is called, with its lovely spike of blue flowers peering through the short grass. Ajugas grow well in most situations and in almost any soil. The Ajuga reptans section succeeds best in a good sound loam, and will bear almost any amount of moisture.

There are a few kinds that I would direct attention to as worthy of more extensive cultivation than they are at present receiving. Ajuga reptans alba is of diminutive habit, but is worthy of a place in the herbaceous border or the foot of the rockery, its pretty white flowers lasting for a length of time. Ajuga reptans variegata, white and green, is very attractive, useful where dwarf plants are in request for edging in the spring garden or border. Ajuga orientalis—or, if I mistake not, in some lists atropurpurea—is a very valuable and useful plant for edging purposes, its leaves being of a deep bronzy-purple colour, retaining their colour under all circumstances. It is very effective, and most desirable for those of limited means, for bedding purposes, and it is of very free habit. Ajuga genevensis is a plant of compact habit, has no creeping shoots; its flowers are of the deepest blue. It is a very desirable plant for rock or border. Ajuga pyramidalis, one of our native beauties, ought to be on all rockeries and borders too. Ajuga rosea, said to be a variety of this, is desirable for the sake of contrast of colour in the flowers.

They are all easily increased by seed and division, and may be propagated almost at all seasons. Ajuga rupestris is well adapted for planting on the rockery. Some are imported from other countries, but none are more desirable than our own natives of this family. We have an annual variety called Ajuga chamæpitys, but it is not often met with; it has yellow flowers; interesting chiefly as a botanical rarity.—Veritas.

KNIGHT'S MONARCH PEAR—GOLDEN KNOB APPLE.

Before the planting season closes I should like to call the attention of your readers to Knight's Monarch Pear. It is a variety which ought to be in every collection. The flavour is excellent; it is a good bearer, and remains longer in season than any other variety. It began to ripen here on the 1st of November, and was good for ten weeks. I do not mean to say that the Pears were all ripe then, but one could always have a dish from the shelf. What I wish to state is that they do not ripen all at once like other varieties, and I found it the latest kind here, except Prince Albert, which with me is only fit for stewing. Knight's Monarch ripens well as a standard in favourable localities.

I will also mention a first-class late dessert Apple called Golden Knob, a good bearer, tree very hardy, and fruit an excellent flavour, coming into season now when fruit of all kinds is scarce. As a kitchen variety of Apple for late use I recommend Dumelow's Seedling; this is a great favourite here, and is capital for all culinary purposes after Christmas.—J. Rust, *Tunbridge Wells.*

THE SWEET CHESTNUT (CASTANEA VESCA).

It seems certain that the most ancient of Greek naturalists described this tree under the name of "Dios Balanos," or Jove's Acorn Tree. In our authorised translation of the Old Testament it is mentioned thrice; but in the original Hebrew

the name *Ormun*, derived from a root-word implying nakedness, is believed by recent authorities to apply more fittingly to the Plane tree, which sheds its bark annually. It is found native over all southern Europe, but especially in the warmer parts of the temperate zone. It has been doubted whether the Chestnut is an English indigenous tree; but if not, it must have been introduced before the Norman Conquest, for in the reign of Henry II. (1154–1189) the Earl of Hereford granted a tithe of all his Chestnuts in the forest of Dean to Flexley Abbey.

The most noteworthy Chestnut trees in England are those in Lord Dacie's Park at Tortworth in Gloucestershire. Even in 1150 one of them was known as "the great Tortworth Chestnut." It marks a boundary of the manor, and a century since was considered to be a thousand years old. Its girth in 1720 was 51 feet at 6 feet from the surface. Even this is small compared with the "Chestnut of a Hundred Horses" on Mount Etna in Sicily, of which we add an engraving (fig. 31).

Houel writes of it as follows:—"Its size is so much beyond all others that we find it impossible to express the sensation we experienced on first seeing it. Having examined it carefully I proceeded to sketch it from nature. It is a faithful portrait, having demonstrated to my own satisfaction that the tree was 160 feet in circumference, and having heard its history related by the savants of the hamlet. This tree is called the 'Chestnut of a Hundred Horses' in consequence of the vast extent of ground it covers. They tell me that Jean of Aragon, while journeying from Spain to Naples, stopped in

Fig. 31.—The chestnut of a hundred horses.

Sicily and visited Mount Etna, accompanied by all the noblesse of Catania on horseback. A storm came on, and the Queen and her *cortége* took shelter under this tree, whose vast foliage served to protect her and all these cavaliers from the rain. It is true that out of the hamlet the tradition of the Queen's visit is looked upon as fabulous; but however that may be, the tree itself seems very capable of doing the office assigned to it.

"This tree is entirely hollow. It is supported chiefly by its bark, having lost its interior entirely by age, but is not the less crowned with verdure. The people of the country have erected a house here, with a sort of furnace for drying the Chestnuts and other fruits which they wish to preserve. They are even so indifferent to the preservation of this wonderful natural curiosity that they do not hesitate to cut off branches to burn in the furnace.

"Some persons think that this mass of vegetation is formed of many trees which have united their trunks; but a careful examination disposes of this notion. They are deceived. All the parts which have been destroyed by time or the hand of man have evidently belonged to a single trunk. I have measured them carefully, and found the one trunk as I have said, 160 feet in circumference."

We regret that this Chestnut is not more largely planted. It is one of the most ornamental of trees. When of mature growth it has a noble bearing, its branches graceful, and its foliage bright and free. It is a total contrast to the Horse Chestnut, which Gilpin justly condemns as a heavy disagreeable tree, and even when in flower inharmonious and unpicturesque.

EUCHARIS AMAZONICA.

This beautiful plant is rather capricious in flowering, sometimes growing for several seasons and never blooming. I cannot give the *modus operandi* to flower it with the same certainty as a Hyacinth or Tulip, for I think it would be difficult to attain; but the following may not appear a bad result:—

In the spring of 1873 we potted several bulbs in a 14-inch pot in a compost of turfy loam, leaf mould, and rotten dung, with good drainage. They grew luxuriantly, but never bloomed. The following spring we partially dried them off by spare watering, then in about two months placed the pot on a slate slab over the hot-water pipes, and watered copiously. When the new growth was made it threw up fourteen spikes, six or seven blooms on each, and was in perfection in July. After flower-

ing was over I treated as above, and it has this month (January) thrown up four strong spikes with larger blooms than before. Some growers recommend frequent potting, but I think this is not required, as the bulbs in the present instance have not been potted since 1873. I do not think it should be dried-off so as to lose all its foliage, as it weakens the bulbs. Your able correspondent, Mr. Douglas, wrote in a contemporary that he bloomed it thrice a-year, but whether he meant the same bulbs or a succession I cannot say.—G. P., JUN.

GRAPES OF THE PAST.

IN the retrospect, Mr. Abbey says, all honour to Mr. Hunter; so I, too, would say, Honour to whom honour is due, for the unequalled success that has attended Mr. Hunter's labours in the production of the world-renowned bunches of Grapes produced at Lambton Castle. It may be that Mr. Hunter has been a surprise to himself. Did he really anticipate the result that has fallen to his lot? Perhaps Mr. Hunter will, for the benefit of our craft, enlighten us on the subject. Mr. Abbey names the 19½-lb. bunch of Speechly at Welbeck, where many years ago it was said that the Duke of Portland had more than a hundred kinds of Grape Vines, and in 1781 the bunch above named was presented to the Marquis of Rockingham. The account says it was 4½ feet in circumference and 20¾ inches in length. It was conveyed to Wentworth House, a distance of twenty miles, by four labourers, who in pairs in turns carried it suspended on a staff.

There can be no doubt but there are accounts of other large bunches of Grapes on record if we could only ascertain their whereabouts. I once saw a Vine at Kirkleatham, Redcar, Yorkshire, that had produced many years ago a bunch of Grapes weighing nearly 20 lbs. I do not know whether the gardener's name was Pringle or Proudlock who was there at that time. I was told there was a drawing of the bunch in the hall at Kirkleatham with the particulars. I had the promise when I left that I should be furnished with particulars, but I am sorry to say my informant has failed to fulfil his promise, and has since left the place.

Whatever kind of Grape it may be, whether Syrian, Hamburgh, Barbarossa, or what else, 21 lbs. 12 ozs. is a high standard to aim at. There can be no doubt that Mr. Hunter has arrived at the acme of perfection in the present generation of Grape-growers. May he live long to enjoy the honour so nobly won. I have no idea what the bunches of Grapes grown at Eschol might weigh, but from the account in the good old Book they must have weighed something extraordinary.—H.

FLOWERS CHANGING COLOUR.

WHEN a lad I used to apply blood from a neighbouring slaughter-house to Cowslips and Paigles, which after a season changed the blossom to a reddish shade. In a neighbouring village may be seen in a cottage garden an immense number of Primroses the children have brought home from the hedgerows, changed by some action of the soil to a purplish tinge.—ST. EDMUND.

[We know of an instance of double purple Primroses being brought to a garden at Dunse in Scotland. The next season they retained their colour, but the second season and ever since the flowers have been double white.—EDS.]

WELLINGTONIA GIGANTEA.

THERE have been in the various gardening journals of the past few years measurements given of the heights and sizes of various Wellingtonias in this country. There is a fine specimen in the Priory pleasure grounds, Prittlewell, Essex, the country residence of J. F. Leigh, Esq., M.P. It is nearly 40 feet in height, 8 feet 6 inches in circumference at the base of the trunk, 20 feet in diameter through the branches from tip to tip, and 60 feet in circumference outside of branches. From the information gained in the neighbourhood it has been planted nearly, if not quite, twenty years; and presuming it to have been 5 feet in height when planted, it must have grown on an average 20 inches a-year.—G. A. BROMFIELD, *Gardener, The Priory, Prittlewell, Essex.*

BLUE CORNFLOWER.—I think, but may be wrong, that what a "LITTLE SAVAGE" calls Cornflower is the same as Bluebottle—Centaurea cyanus, blue. July. England. There are also Centaurea depressa, hardy annual or biennial, blue. June. Caucasus, 1818. Centaurea pulchra, beautiful hardy annual, 1 foot high. Flowers blue and crimson. June. Cashmere, 1838. If she likes blue flowers for bouquets I recommend her to get blue Lobelias.—W. F. RADCLYFFE.

THE BLACKBERRY.

MANY years ago we heard a gardener in Essex assert that he had a hybrid seedling bearing fruit that had for its parents the Raspberry and Blackberry, but when we returned from India the gardener was dead, and no one knew of his seedling. Without any such hybridising our American relatives have several varieties of Blackberry which they cultivate, such as the Lawton, Dorchester, &c. The Lawton may be obtained at some of our fruit nurseries. A Californian paper announces another under the name of the Aughinbaugh Blackberry, and publishes the following drawing and description of it. It is named after its raiser, Mr. G. Aughinbaugh.

Fig. 82.—Aughinbaugh Blackberry.

"This berry ripens from four to five weeks earlier than any other variety of the Blackberry known in California, as has been shown by the result of its cultivation for the last two or three seasons. It begins to ripen there from the 1st to the 15th of May, and continues to produce berries until about the middle of July—about the time other varieties of this berry begin to appear. By reference to the engraving it will be observed that the fruit is very large, and in form quite unlike to other varieties, being more the Mulberry than the ordinary Blackberry.

"In addition to the advantage of large size and early ripening, the fruit is of excellent flavour, and does not contain so large a proportion of seeds and cores as other varieties. The plants grow up hardy, thrive well, and produce abundantly. We can attest from personal knowledge to all we have said above, and have no hesitation in commending this berry to the attention of fruit-growers everywhere."

NOTES AND GLEANINGS.

BOXWOOD, the wood of BUXUS SEMPERVIRENS, which is almost exclusively used for the best kinds of wood-engraving, has been for some years becoming more and more scarce. Wood of the largest diameter is the produce of the forests of the countries bordering on the Black Sea. Large quantities are produced in the neighbourhood of Poti, from which port the wood is shipped direct to England. The supply, however, from this port is, we learn, becoming fast exhausted; and it is said, unless the forests of Abkhassia are opened to the trade it must soon cease altogether. The quantity exported from Poti during the year 1873 amounted to 2897 tons, of the value of £20,621; besides this, from 5000 to 7000 tons of the finest quality annually pass through Constantinople, being brought from Southern Russia and from some of the Turkish ports of the Black Sea for shipment, chiefly to Liverpool. An inferior and smaller kind of wood supplied from the neighbourhood of Samsoon is also shipped at Constantinople to the extent of about 1500 tons annually. With regard to the boxwood forests of Turkey, the British Consul at Constantinople reports that they are nearly exhausted and that very little really good wood can now be obtained from them. In Russia, however, where some little Government care has been bestowed upon forestry, a considerable quantity of choice wood still exists; but even there it can only be obtained at an ever-increasing cost, as the forests near the sea have been denuded of their best trees. The trade is now entirely in English hands, although formerly Greek merchants exclusively exported the wood. In the province of Trebizonde the wood is generally of an inferior quality; nevertheless, from 25,000 to 30,000 cwts. are annually shipped, chiefly to the United Kingdom.

—— THE distillation and manufacture of ATTAR OF ROSES is a large and important branch of industry in Adrianople. In the northern parts of the country, we are told in an official document, the produce of 1873 exceeded by 35 per cent. that of the

previous year, the quantity distilled being some 121,875 ozs., valued at about £90,000. It is chiefly exported from Philippopoli to England, France, Germany, and Austria; and recently merchants in the United States and Germany have opened correspondence with firms in Adrianople, with the view of establishing agencies to further extend this branch of commerce.—(*Nature.*)

—— The Metropolitan Floral Society have been enabled to make arrangements (through the liberality of the Directors of the Alexandra Palace Company) for holding a grand autumn Exhibition of Flowers at their Palace, on August 24th and 25th, 1875.

—— On the 3rd inst. at his residence Heath Cottage, Thorpe Hamlet, Norwich, Mr. John Bell, aged seventy-one. For thirty-nine years nurseryman and seedsman in that city.

SEED-SOWING.

To sow seed well is to lay the foundation of success with any crop, and more especially of such as are cultivated altogether in the open air. Simple as this matter may appear, it is in reality a most important one, and to which, I think, particular attention may be given with greater advantage at this period of the year than at any other; not that it is ever to be lost sight of, for had we not the approaching seed time in view when we hastened last autumn to dig and expose every bare space or garden bed to the sweetening influence of the coming winter's frosts, winds, aye, and snow and rain too? for soil well-drained that is thrown up as loosely and roughly as possible not only runs no risk of becoming sodden, but, on the contrary, derives much benefit from the moisture which passes so quickly through it, depositing nutriment in its passage, so that even in winter the clouds may literally be said to "drop fatness."

How many times has the importance of autumnal digging been explained, and yet how frequently do we see kitchen gardens altogether neglected throughout winter? There lies the soil—inert, cold, and sodden. No care or attention whatever has it received since the past season's crops were removed; and when approacing spring compels some attention to be given it, what medium can possibly be worse for the assistance of vegetation than the crude sour clods which, but for such tardy and untimely culture, would have been free and open as ashes? Much more might one say upon the rough, unkempt, and most unpleasant appearance of such gardens in winter, but I will only add that high culture and neatness are inseparable.

It may be asked, What has all this to do with seed-sowing? The answer is—and I wish to make it as plain and forcible as possible—when seed is sown in unsuitable soil there is much risk of failure, and the loss of a single crop implies a corresponding failure in our future supply. True it is that some blame may be attached to the weather, but the aim of a really earnest man is undoubtedly to maintain a full and unbroken supply of whatever may be required at his hands, to combat and overcome, so far as may be, the difficulties of unkindly seasons, more or less of which he must always be prepared to encounter; and he will do so successfully if he be a man of forethought, energy, and resource—anticipating the future by his plans—working with a system thoroughly digested but as elastic as possible—adapting his measures to the circumstances by which he finds himself surrounded.

Now, do not suppose that I am writing solely for the benefit of those having, or hoping to have, the charge of extensive gardens; rather should these remarks be regarded as applicable with equal force to gardeners of every class, and my aim is to animate those who have hitherto been content to remain passive under evils that are not irremediable to such exertions as experience has proved likely to be rewarded by success. I heard a person remark last year that he had lost the first two sowings of Peas, and felt doubtful about the third, and I gathered from his manner that he did not consider himself at all blameable in the matter. No, the soil was at fault; it was so close and heavy in texture, and so foul withal, that the seed either perished outright or was rendered useless by the attacks of insects as soon as it became softened by the excessive moisture of the soil. Here was an evil plainly set forth. What was the remedy? Just this: for each Pea row the soil should have been raised a little above the ordinary level, a drill made and almost filled with a mixture of soot, old leaf mould, ashes, or sand, upon which the seed should be sown and covered with some of the same light porous materials, settling the whole gently down with the back of the spade. Thus the seed would be kept from contact with the cold wet soil, and the process of vegetation rendered far less critical and uncertain.

It is an excellent rule never to sow seed in soil that is in an unsuitable condition to receive it, or there will be considerable risk of failure, say in about an equal ratio to its want of soundness. I will give an example drawn from my own practice last season. Several beds of Carrots were sown, one of them in soil which, although in excellent condition at the time of sowing, was liable to be reduced to a hard compact mass by a heavy shower; and that is just what happened before any growth was visible, the crop proving a total failure. What was to be done? The other beds were in a flourishing condition, but were not calculated to afford enough Carrots for the maintenance of a full supply. I had therefore to revert to an old but certain plan, which was to make holes a foot apart and as much in depth over the whole of the surface of the bed which had failed, filling them firmly with a mixture of leaf mould and sand, and in each sowing a pinch of seed. The result was even better than I anticipated, for those late Carrots were decidedly the best in the garden. That piece of land received such a heavy dressing of ashes and manure last autumn that no future crops can fail from a similar cause. It is only fair to add that no such failure could have happened at all had the plan adopted as a certain remedy been followed in the first instance.

It was about four or five years ago that the plan of covering Pea rows with small squares of glass immediately after sowing was propounded; since then I have so used glass for the protection of a variety of seeds that are liable to suffer from the attacks of birds or mice. The advantages attendant upon the plan and benefit derived are so great, that I do not hesitate to call especial attention to it once more. The glass is laid upon the soil covering the seeds at the time of sowing, and is not removed till the young plants lift it from the ground, which they do very quickly, for the glass acts not only as a most efficient protector, but as a capital agent for the attraction and transmission of heat to the soil from the sun's rays, so that vegetation is a much quicker process than under ordinary circumstances.—Edward Luckhurst.

DINNER-TABLE DECORATIONS.

There can be no doubt a moderate arrangement of flowers gives a dinner table an elegant appearance that nothing else will. If the dinner table be of a medium size, one large stand or vase with some specimen glasses grouped round it will be quite sufficient; but for a table of large dimensions, of course, the arrangement of flowers must be of a much larger scale. In selecting flowers, those with a powerful odour should be avoided as much as possible, or, at all events, only a judicious amount employed, as large quantities of such as Gardenias or Stephanotis make some feel faint. Arrangements of cut flowers should, as a rule, have plenty of Fern fronds interspersed through them, which set off, but at the same time tone down, their varied hues. When selecting flowers for cutting, it should be borne in mind if they are to be subjected to artificial light, as it is well known some yellow and mauve shades, if subjected to gas or any similar artificial light, change, and not for the better. As far as possible all Ferns, foliage and flowering plants, from which a supply is intended to be cut, should be cooled-off as much as possible before being subjected to the knife. In some cases this cannot be managed: but, as far as possible, those cut from a warm stove should be avoided, as, when subjected to the dry hot atmosphere of sitting-rooms, they soon shrivel and fade. Another thing which tends much to keep flowers and Ferns fresh, is having their stems severed by a sharp knife in place of a pair of scissors. They should be cut in a slanting direction. By so doing the little tubes and vessels in the stem are cleanly severed, and not crushed, as they would be were scissors employed, and so are enabled to draw up the moisture more freely, which keeps them fresh. When about to make an arrangement, it is a good plan to have a bowl of water at hand, with the chill just taken off; and before each Fern frond is about to be placed in the position which it is to occupy, dip it into the water in the bowl, lift it out, and give it a gentle shake, which will, to all appearance, remove the water from it; but though not visible, tiny drops will remain on the leaflets, which help much to keep them fresh. Some flowers can be subjected to the same treatment; but it is more adapted for Ferns and sprays of foliage than for flowers. Some people

have an idea that different things, such as sal-ammoniac for instance, if put in the water in which flowers are placed, helps to keep them fresh for a longer period; but I myself have always found nothing better than fresh cold water. If the vase be small, and the flowers in it required to last as long as possible, if the water be changed every second day, and the points of the stems fresh cut, it will be found surprising for what a length of time they will remain fresh-looking. Some flowers to last should have a drop of prepared gum dropped into their centre, others be wired; but space will not here permit of me enumerating those varieties which require that treatment. Be the arrangement large or small, plenty of fronds of light-looking Ferns, such as Maidenhair, should be associated with the flowers.—A. Hassard (in *The Gardener*).

GILBERT'S SEA-KALE AND RHUBARB TUBS.

In looking through the renowned gardens of the Marquis of Exeter recently, my attention was drawn to a very useful aid in forcing Sea-kale. Mr. Gilbert, who is known as one of the most practical gardeners of the day, refuses to be bound to conventional appliances; hence the innovation in hand-lights, which are so eminently serviceable as protectors. He has now fallen foul on Sea-kale and Rhubarb pots: being unwieldy and cumbersome, and even liable to breakage, they fell short of his standard of excellence, and he sought to obviate their dis-

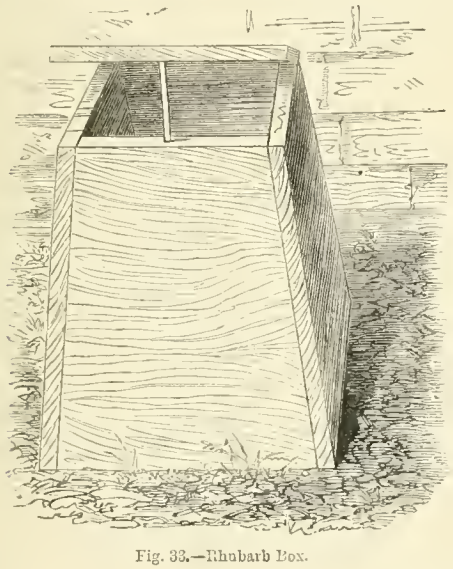


Fig. 33.—Rhubarb Box.

advantages by a trial of wooden tubs or boxes. These are simply four plain inch-boards nailed together without dove-tailing. They are 1 foot wide at the top, increasing to 18 inches at the bottom for covering the root. In height they vary from 18 to 30 inches, according to the kind and height of vegetable requiring to be forced. As seen in use they answered perfectly, and made one wonder that something of the same simple and effectual nature was not in more general use long ago.

The accompanying engraving (fig. 33), from a photograph will sufficiently explain these pseudo tubs, for of course they are bottomless, therefore not really tubs at all.—J. Wright.

SPARROWS versus FRUIT BUDS.

In order that the domestic sparrow may not get off under Mr. Abbey's enthusiasm I trouble you with a few lines. My experience of him in the gardens of Surrey is quite the reverse to his. When I came here the place swarmed with sparrows. I bought wire pea-guards, and put netting over other seeds. Afterwards I found the sparrows eating my Pear buds, one tree being cleared. Gooseberries suffered the same fate. As a last resort I began shooting them, and have shot them flying with buds in their bills—caterpillar once! Why, when I have had Gooseberry trees covered with caterpillars, did they not clear them? Because they prefer seeds; even Potatoes are a relish. My gardener is often told by those around, "I wish your master would not drive his sparrows over here!" Surely we are not all wrong.

The blue titmouse spoils Pears by picking them near the stalk, &c., but see how he works the rest of the year! If Mr. Abbey had written-up the hedge sparrow I would have joined him heartily. I say the house sparrow and finch tribe should be shot without pity. Do they send Mr. Abbey's pet bird to New Zealand? I think not: he would be as bad as the Scotch Thistle.—Age.

NOTES on VILLA and SUBURBAN GARDENING.

Finish with all expediency the alterations or improvements on hand in the planting of trees and groundwork. Any delay in this important matter too late in the season is detrimental to the well-doing of the subjects concerned, and will be liable to disappoint those who watch the results with an expectation of success.

The lawn ought now to be attended to by rolling frequently, and any defects or unlevel portions, which will be easily discernible after the severe frosts we have had, must now be put right, as it is as good a time as any in the whole year for this kind of work. Let all the outlines of embankments or terraces be put in order if not well defined. This adds as much as anything to the beauty of a lawn, especially that connected with many residences around a town, for the eye can at once glance upon the whole of it. Any of the edgings by the walks of turf which are out of the regular line may now be cut into shape with the edging-iron; and although it is not well to do it too early, owing to the liability of frost and rain to perish the sides down again, yet if cut about this time they will be safe from that contingency.

Box hedges may also be clipped before the month is out; these, if done before, are liable to be turned brown by a severe frost, especially if trimming has not been regularly practised, and they have to be cut rather severely. There is some difference of opinion as to the shape of these hedges; some prefer them cut square on the sides and flat on the top, others choose a triangular form, so that they may be narrow at the top. I give preference to the latter plan, not only because it looks best, but the hedge has a better chance to grow. When cut square at the top it must of necessity be cut hard in order to regulate its height, and then it turns brown and does not break into growth regularly, causing it to appear unsightly during the whole summer. It is well to proceed with this work now, so that it may not interfere with other and more important operations that will come on as the season advances.

As most of the bulbs of Hyacinths, Tulips, &c., in beds will now be showing their foliage above the ground, they ought to be protected every night with canvas or netting spread out upon hoops thrown across the beds, to be uncovered every morning as soon as the weather will allow.

It will be remembered that in the autumn I gave a list of annuals that might be then sown for spring-blooming, and I may again remind those who are fond of such things—and they are most of them really beautiful—that most of the sorts may be again sown to bloom during the season. The same rules then stated may be applied now, except that, if the ground can be now spared, the seed may be sown where they are to flower, which will save the work of planting-out. Those sorts from the autumn sowing that have not yet been planted-out should be by this time, and the beds kept very clean on the surface and be frequently stirred, as the plants will in time spread so as to preclude the operation. A few of the sorts, such as the Nemophilas, must be carefully watched, as the slugs are a great pest to them. Again, it frequently happens that small plants in the beds are frequently almost worked out of the soil owing to the loose nature of it from the effects of the frost. Choose a dry day, and fasten such plants with the hand.

Look to plants in frames, such as the pots of Mignonette, Stocks, Carnations, and Picotees. Clean them and move the pots to prevent them rooting into the soil beneath. Go on with the propagation of bedding plants as fast as cuttings can be obtained. A good plan is to put the cuttings thickly into small pots, and pot them off when well rooted, singly if room is abundant or the plants delicate, or three or more in a pot to economise space.

The Centaurea candidissima is better propagated by putting one cutting in a pot, so that when it is rooted it will be the better shifted into a larger pot. This plant will not so well bear pulling about at the roots as a Verbena and many other plants; moreover, in the propagating bed much damp must not circulate over this plant, or the chances are that most of the cuttings will die off before they are rooted. Light and air are better agents to assist them than a shady and damp atmosphere, and the soil must be of a sandy nature, not liable to hold too much moisture. I have been thus particular in detailing the mode of propagating this plant in the spring because I know so many

amateurs fail with it, and its being so desirable a plant for bedding purposes.—Thomas Record.

DOINGS OF THE LAST AND PRESENT WEEKS.

HARDY FRUIT GARDEN.

All the planting, pruning, and digging amongst the trees have now been finished, and the buds are rapidly swelling; they are not very forward this year, and at present the nights are frosty and the days cold, so that but little progress is made, and as late blossoms are more likely to escape the frosts than early, the chances are in favour of a good crop. We are not troubled with feathered songsters eating the buds, but the house sparrows are a continual source of annoyance; their object does not seem to be so much to make a daily meal off the buds, but to pick them off and drop them on the ground. They put us to a considerable expense for wire protectors (something like a shilling a-yard), without which no Peas could be obtained. The flowers of Crocuses, Snowdrops, and Primroses are objects of their special attention; as soon as the flowers show signs of opening the birds pick them off and strew them around the plants. On the other hand, it is said that the good they do more than compensates for the mischief; but it is not so at Loxford, and it is quite necessary in self-defence to destroy as many of the birds as we can, and to demolish all the nests before the eggs are hatched. An amateur friend residing at Ilford was very much annoyed with their eating the buds of his Gooseberry bushes. He tried catching them with steel traps, which he thought was cruel, neither was it effectual. The next plan was successful, and it is now always adopted when the buds are bursting; it is a plan, moreover, that commends itself to amateurs. He treats the birds kindly by feeding them with bread crumbs after breakfast, and placing water for them to drink; the sparrows appreciate this treatment, and leave the buds alone. The small maggot that bores into the Apples and occasionally attacks the Pear has been very troublesome; it has been considerably reduced in numbers during the last two or three years, but has not quite been eradicated. The most certain way to destroy it is to gather all Apples attacked, and to destroy them at once; but dusting the trees at this season with dry lime has been tried, and we fancied with good result. A calm dry day is the best time to do it. The branches must first be made wet by syringing with soapy water, and immediately after apply the lime by throwing it on with the hand. The Gooseberry caterpillar has been quite destroyed, not by the sparrows, nor by picking, or dusting the trees with poison, but by removing the surface-mould from under the trees, and trenching it deep in the garden quarters, and filling its place with loam free from larvæ. Another desperate enemy to the trees is the immense larvæ of the goat moth, which has killed many of our trees. When once a colony of them has become established on a tree—or rather in, for they penetrate the hardest wood and tunnel it in all directions—the chances are that the tree will be destroyed. Should any of the trees become cankered, the eggs are deposited there in preference to a healthy tree.

FRUIT AND FORCING HOUSES.

Vineries.—The earliest houses are progressing favourably, and the growing shoots require almost daily attention, tying them down, stopping, and thinning-out where crowded. The Vines are trained on the short-spur system, and a young rod or two are trained-up annually to replace those which have become unsightly by long spurs. The rod should not be allowed to grow to the top of the house in one season, but be stopped when it has grown 8 or 9 feet, and at pruning time this length is reduced to 4 or 6 feet. Stopping the rod at 3 or 4 feet has been tried, and causing the main bud to start again; but this is not the best way, as the buds immediately above the place where the growth was stopped do not always start well. All such young growths should be freely exposed to the light. We have just cut the Lady Downe's Grapes in the latest house, pruned the Vines, and are washing and dressing them as well as surfacing the borders. The bunches have been cut with a good length of cane, the end of which has been inserted in bottles of water.

Cucumber Houses.—The plants are now growing freely, but the leaves have been formed in a high temperature and almost without the aid of sunshine. It has therefore been necessary to dull the glass when the sun shone out powerfully for a few days, as the leaves suffered. Smoked the house to destroy aphides and thrips. It is quite necessary to maintain a minimum temperature of 65°, and the atmospheric conditions should be such that continuous healthy growth may be kept up. The plants will grow freely in a steaming atmosphere with a high temperature, but the leaves are such that they will not resist the dry hot days we have in March. Evaporating troughs are provided in the house at Loxford, but it was found that the plants succeeded by far the best when only half the quantity was kept filled with water. The surface of the border in which the Cucumbers are growing is damped over once every day; the paths, walls, &c., twice or three times.

Peach Houses.—The weather has been unfavourable for Peaches, especially those that are setting, and it is very undesirable to maintain a high night temperature if it necessitates overheating the hot-water pipes; 55° is quite high enough. Thinning the fruit and superfluous shoots is attended to at the same time. As soon as the fruit is fairly set it ought to be well thinned out, leaving about twice as much as will ultimately be allowed to remain. The young wood must also be removed with an unsparing hand. Two more growths besides the leader will be quite sufficient. The side growth nearest the base should remain, and one on the opposite side a little higher up the shoot. If there are any aphides on the growths it must be destroyed at once by fumigating. Syringing will hold red spider in check, rendering its attacks harmless, but the Peach aphis must be destroyed in its earliest stages. Decoctions of quassia chips, soft soap, tobacco water, and insecticides innumerable have been recommended to destroy this pest on Peach trees. This most of them will do if all the fly can be reached, but in a large house with the most careful syringing it cannot be done, as the leaves curl up as soon as they are attacked, and thus shelter the aphis; but tobacco smoke penetrates everywhere, and is certain death to them.

GREENHOUSE AND CONSERVATORY.

Owing to some mistake of the punctuation in last week's "Doings," Phalænopsis grandiflora is said to flower all through the winter in a minimum temperature of 50° to 55°; it ought to be 60° to 65°, the lower temperature given is for Cœlogyne cristata. Both species are the very cream of what Mr. Bateman styled bridal Orchids, and everybody ought to know that they can be grown as easily as Zonal Pelargoniums if they have the right treatment. Now that plants from the forcing houses are being removed to the conservatory, the plants must not be so freely exposed on cold days, as the opening flower buds receive a check which oft-times prevents their unfolding altogether. Tying and placing sticks to tree or perpetual-flowering Carnations. Any flower buds where the pods are likely to burst, are tied with a strip of soft matting or small gutta-percha rings.

Potting Stage Pelargoniums. These are not grown to make exhibition specimens, but for the flower trusses; and both for decorative purposes and for cutting, small plants in 5 and 6-inch pots are the best, the flower trusses from such are not only larger but the flowers are of better quality. Exhibition plants require much attention at this time as regards tying-out the growths. These project over the pots to a considerable extent, and cannot be effectually trained-out to a fastening round the rim of the pot. Two stout sticks must be laid on the pot at right angles to each other and be tied-down to the rim. They ought to project as far as the outer branches. A stout wire ring is then tied to the outer ends of the sticks, to this ring the ties can be fastened. Cinerarias intended to flower late as specimen plants, require to be trained in the same way as Pelargoniums, but it is not usual to do more than to place a wire ring under the rim of the pot, to which the growths are brought down. This must be done with care, as the succulent growths are very easily broken off. Cyclamens are very useful in this respect, that they do not require any tying or training of the growths; and all the attention, except watering, required at present is to remove mouldy flowers and leaves at once. This matter has been noticed in previous numbers, but it is so important that unless the mould is speedily removed the best plants might be destroyed by it. Now is the time to get rid of green fly; fumigating must be kept-up until not one remains. With the lengthening days the insect breeds more rapidly, and it is but seldom that any houses are quite free from it. If any should be supposed to be, it is better to fumigate as a preventive.—J. Douglas.

PROVINCIAL HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

TRADE CATALOGUES RECEIVED.

R. B. Matthews, 66, Victoria Street, Belfast.—*Seed and Nursery Catalogue.*

Daniel Bros., Norwich.—*Illustrated Guide for Amateur Gardeners.*

T. S. Ware, Hale Farm Nurseries, Tottenham.—*Spring Catalogue of Hybrids.*

J. & B. Marsh, Market Place, Kingston-on-Thames.—*Catalogue of Seeds.*

J. Harrison, North of England Rose Nursery, Darlington.—*Descriptive Seed Catalogue.*

W. Barron & Sons, Elvaston Nursery, Borrowash, near Derby.—*Descriptive Catalogue of Roses, &c.*

Y. Strachan, 4, High Street, Wrexham.—*Catalogue of Garden and other Seeds.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Books (*T. Bradshaw*). — The best illustrated book on flowers is the "Botanical Magazine;" on birds we only know very expensive works, each confined to the ornithology of one country.

Veronica serpyllifolia under Trees.—In answer to "Surrey's" inquiry as to whether Veronica serpyllifolia will grow under trees where grass does not do well, I may state that I have never tried it in such a situation. Two years ago I recommended an amateur friend to use it for carpeting narrow paths between small flower beds, which he did, and is now highly pleased with it. One end of his little flower garden is partially shaded, but not much overhung, by a large Sycamore, and near that end I notice that the Veronica grows a little weaker and not so dense, although it does not get patchy. I would not, however, expect it to succeed very well under the thick shade of the Lime tree.—R. D. Taylor.

Crystal Palace (*W. Ayre*).—We never heard of the essay you mention.

Passifloras Pruning (*F. H.*).—The Passifloras which have not flowered and have foliage different from those which have flowered, may be different varieties, but probably the foliage is not yet in character. Cut all the side shoots to within an eye or two of their base, and leave the main shoots at 15 inches apart. Do not prune these or the side shoots until the end of March or beginning of April, but before they grow shorten the main shoots of last year's growth to firm wood, say one or two-thirds their length according to their strength and ripeness of wood; if weak, two-thirds; if strong and firm, one-third.

Removing Worms from Lawn (*Idem*).—Dissolve 1 oz. of corrosive sublimate (bichloride of mercury) in thirty gallons of water, and with this water the lawn. The worms will come to the surface and may be swept off. Take care that fowls, &c., do not eat them, or they will be poisoned.

Pruning Roses (*W. W.*).—Strong-growing Roses ought, when established to be pruned less than weak growers. In your case we should cut the weak growers to two, and the strong growers to three or four eyes, or if they have but little root cut them in to two eyes.

Heating a Propagating Pit (*P. E. M.*).—Your plunging bed will be about 3 feet wide, and will require two rows of 3-inch pipes. For top heat you will require a pipe to be taken along the end and front above the plunging bed, and to the door, then along the plunging bed side to the other end of the pathway, alongside or beneath the stage to the door, continuing across the end, along the back wall, and return beneath the plunging bed, the pipes being taken 9 inches from the walls of the bed and 18 inches between them. Your house will have with this arrangement a cool stove temperature.

Sowing Rose Seeds (*St. Edmund*).—Sow them now, after breaking-up the heps into parts with the hand, in pots or pans well drained, in light rich soil, and cover with fine soil about half an inch deep. Plunge in an open sheltered situation outdoors, keeping moist and protecting from mice, which are very fond of the seeds. Very close wire netting is the best for this purpose. The soil is to be kept moist, and when the seedlings have three or four rough leaves raise them with a piece of wood, and pot singly in small pots; place in a close cold frame until established, shaded from the sun. When the pots have become full of roots transplant in an open situation in good, rich, light soil. A portion of the seed only may vegetate the first year.

Transplanting Rose Cuttings (*Idem*).—Pot them at once if showing incipient roots, and plunge in a cool frame until established, then plant out. If intended for pot plants shift into larger pots, and plunge in the open air. Hollyhock cuttings should be encouraged to fill the pots with roots, be duly hardened-off, and planted-out in April.

Plants for Surfacing Ground Beneath Chestnut Trees (*Alpha*).—The best subjects are the Ivies, the common Hedera Helix with H. hibernica (canariensis) being good. They should be planted with the roots as much in the open parts as possible, so that they may have the benefit of moisture, and the shoots should be trained into the shaded and dry parts. The Periwinkles are good. They should be planted a foot apart, the Ivies 6 feet, or for quick covering 3 feet. Rhododendrons and Laurels might also be tried should the subjects named he too dwarf or their growth unsatisfactory.

Raising Vines from Eyes (*H. T.*).—You can raise them in the dung hotbeds, and now is a good time to begin. The eyes should be taken from well-ripened wood, and cut over transversely above the eye and just clear of it, and from the back of it make a slanting cut downwards and through the shoot, commencing opposite the eye, and bringing out on the same side as the eye about an inch below it. You may put them singly into small pots filled with light tarfy loam, moderately drained, and gently pressed. The wedge-like end of the eye is to be thrust into the soil and level with the surface. The pots are to be plunged in the hotbed and kept moist. In due time they will put out a shoot, and when this is about 6 inches long shift into larger pots and grow on in a light warm house.

Early Rhubarb (*D. D.*).—The best kind for earliness and quality is Johnson's St. Martin's. Chrysanthemums—detach a shoot from the base when about 3 inches long, and pot either singly or three in a small pot, and place in a close cold frame or mild hotbed until rooted, then remove to a cold frame, and shift into larger pots as the pots fill with roots, and in and after April they may be stood on coal ashes in an open situation, but sheltered from winds. Half a dozen large-flowering varieties are Empress of India, white; Blonde Beauty, white, delicate rose stripe; Lady Hardinge, rose; Antonelli, salmon orange; John Salter, red cinnamon; Mr. George Glenny, pale yellow; and Jardin des Plantes, golden yellow, the best of the yellows.

Vines for Greenhouse (*A. H. S.*).—Your prospect of Vines succeeding is not good, the house having an east aspect, a wall to the south, and no means of heating. Besides, they would not succeed well did it get sun in summer, unless they were trained to the roof at about 15 inches from the glass, and were grown in large pots (18-inch), and had top-dressings of rich compost. The best kinds would be Black Hamburgh and Buckland Sweetwater.

Cutting-in a Laurel and Holly Hedge (*K. Y.*). — Cut the Laurel hedge in about the middle to the end of March, and the Holly hedge from the middle to the end of April. Both will bear cutting severely.

Plants for Carpet Bedding (*Idem*).—A few are Sedum glaucum, S. anglicum, Pachyphiton bracteosum, Howarthia cymbifolia, Alternantheras amœna, A. magnifica, A. amabilis, A. paronychioides, Ajuga reptans purpurea, Oxalis corniculata rubra, Pyrethrum Tchihatchewi, Lobelia pumila grandiflora, and the double variety flore-pleno, Antennaria tomentosa, Santolina incana. Those are the plants, or some of them, usually employed for covering the ground, but there are others which require to be associated. Arrangements of the kind have been given from time to time in the Journal, notably last year, the last volume, pages 247, 279, 298, and 323, containing much information on the subject, with practical illustrations of the bedding at Hampton Court Palace.

Soft Putty (*Mootee*).—Dr. Hogg, in the "Year Book," states, "My friend, Rev. W. Kingsley, has long used a composition which he has found to answer the purpose admirably. It consists of boiled linseed oil nine parts, tallow one part; let these be mixed with whiting to the required consistency, and they will form a putty suitable for all garden glazing, and which can be removed at any time without difficulty."

Double Furze Propagation (*Idem*).—By cuttings in March of last year's growth in sandy soil, better if a little peaty, in a slightly shaded border; or at the end of summer of the growth of the current year, on an east border.

Fruit Trees for Wall of Melon House (*A Lady in Cheshire*).—The soil being light and little of it will not suit Peaches, unless you were to remove it and form a border of a more retentive description; or you may enrich it and make firm. Cow dung would be the most suitable stimulant. In this case it would be best employed for Peaches and a Nectarine; or you might have one Apricot, and a Peach and Nectarine. The soil as it is would best suit Apricots and Plums. It is too light for Pears. Figs would be suitable if this fruit is liked.

Tenants Removing Shrubs, &c. (*Wishful to Do Right*).—So soon as the Rose and fruit trees were planted by you, the law is that they were affixed to the soil and belonged to the landlord. You cannot legally remove them without his permission.

Maréchal Niel Rose in Greenhouse (*Constant Subscriber*).—You may thin-out weak wood and slightly shorten strong shoots of Marechal Niel, but do not let your gardener overprune.

Tea Roses for Border (*Lady Jane*).—Adam, Alba Rosea, Belle Lyonnais, Catherine Mermet, Devoniensis, La Boule d'Or, Louise de Savoie, Madame Levet, Madame Willermoz, Marie Sisley, Cheshunt Hybrid, Souvenir d'Elise, Souvenir d'un Ami. *Noisettes*—Maréchal Niel and Céline Forestier. The above fifteen will most probably succeed well in the situation named. To these we might add Veitch's Duchess of Edinburgh, Madame Falcot, Madame Margottin, Homère, Madame Bravy, and Perle de Lyon.

Apple and Pear Trees Diseased (*J. M. A.*).—The vast number of swellings on the branches you enclosed are all the results of the American blight. That blight is the Aphis lanigera, and if it still attacks the trees the insects at this season are down upon the roots of the trees, where they winter. Remove the earth from over the roots, leave them exposed for a few days, pour over them abundance of ammoniacal liquor from the gasworks, and then return the earth.

Lily of the Valley (*C. B.*).—Mr. Standish, Royal Nurseries, Ascot, imports extensively the foreign rhizomes you need. Write to him and explain your requirements.

Growing Ferns (*Alpha*).—We have no doubt that "H. L." would show his Ferns grown in common garden soil, but your cheapest and most certain test would be to grow two or three in such soil yourself.

Bark of Fruit Trees Partially Destroyed (*J. H.*).—As the rabbits have only eaten off part of the bark the trees will not be killed. Cover the wounds with a plaster made of equal parts clay and cowdung. To prevent further mischief wrap a hay or straw band round each stem to the height a rabbit can reach.

Heating Greenhouse (*G. W. J.*).—A colza-oil lamp will be of no use for heating your house. You will require a stove boiler and two rows, a flow and return 2-inch hot-water pipes all round the house, excepting doorway. The stove boiler may be either in a shed at the back of the house or within the house, but it must have an iron funnel or pipe to take away the smoke and other obnoxious products of combustion, being careful to keep it clear of woodwork.

Annuals for Smoky Gardens (*A Lady Gardener*).—We presume you wish for hardy kinds only; such are *Alyssum maritimum, white; Leptosiphon densiflorus, lilac, and its white (albus) variety, but the last two do not bloom well after the beginning of September; Nasturtium Tom Thumb, vars. *Beauty, orange-spotted, *crimson; N. King of Tom Thumbs, scarlet, and *King of Tom Thumbs, golden; Nolana atriplicifolia, blue, white, and yellow; N. lanceolata, blue; Sauvitalia procumbens, flore-pleno, yellow; *Saponaria calabrica, rose; *S. calabrica alba, white; and Calendula officinalis superba, orange, though of no good for bedding, stands smoke remarkably well. Those marked with an asterisk will bloom as late as you wish, but the others will not. To make up your number we name some which are half-hardy annuals, or may be treated as such: Ageratum Imperial Dwarf, Lobelia speciosa, Pyrethrum Golden Feather, Senecio elegans—double crimson, lilac, purple, red, and white; and Tagetes signata pumila. Œnothera macrocarpa and taraxacifolia, yellow and white-flowered respectively, are sometimes used for beds, but they do not bloom late enough. The Passion-Flower against a south wall ought to have flowered within four years, but probably it is in too exposed a position, the wood not ripening well. It is not likely it will flower, though if it grow freely we should give it further trial. Glory of Waltham is a good red Rose for a wall.

Propagating Apples, Arbor-Vitæ, and Thuja Lobbi by Cuttings (*J. W.*).—Apple cuttings should be of last year's growth, with or without a short heel of the old wood, and they should be about 10 inches in length, and be inserted in the soil two-thirds of their length, and from this the eyes should be removed. They are to be cut transversely below the lowest joint, and if they have any old wood an inch is sufficient. Plant firmly in rows 9 inches apart, and 3 inches asunder in the rows. A sheltered and slightly

shaded position on a north border is most suitable. Now is a good time to put in the cuttings. Arbor-Vitæ and Thuja Lobbi cuttings should be made in July or August after the growth is complete, taking them off close at the base of the current year's growth, and inserting in sandy loam, mixed with a third of sandy peat, and the surface covered with half an inch of silver sand. They are best placed in a frame or hand-light in a cold house, or they may be placed in a cold pit or frame, and should be kept moist and shaded, and have air only to allow any accumulation of damp to pass off. When they begin to grow air will need to be given more freely. The cuttings will also succeed under a hand-light. We know of no book giving "full instructions for striking cuttings of all sorts."

Grass Keeping in London Churchyard (*George Allen*).—The ground is no doubt much infested with moss, and has a firm surface. It will need to have the surface loosened, and a top-dressing given of rich soil or compost, with a sixth part of lime intermixed. A covering of this half an inch thick in March, and raked over well early in April, when you may sow it rather thickly with Poa nemoralis sempervirens, Festuca duriuscula, Cynosurus cristatus, Poa trivialis, 5 lbs. of each, Lolium perenne tenue 20 lbs., Trifolium repens 8 lbs., Trifolium minus 4 lbs., in mixture a sufficient quantity for one acre. Rake very lightly after sowing, and roll well, or if this be not practicable beat with a spade. If sparrows are not numerous the raking after sowing may be dispensed with. Do not keep very closely cut, as the grass, if much used, will be liable to burn and die in dry weather, and if possible cut with an early prospect of rain or in moist weather.

Pruning Neglected—Pear and Cherry Trees (*H. Timperley*).—Cut away the young shoots to the last eye of their base, and any very long spurs we should also shorten to the lowest bud at the base; but you must not remove the apex if a fruit bud, which you will be able to distinguish now, so that the pruning should be at once done. We should confine any treatment of the spurs this year to shortening the very longest ones. The Cherry tree is to be treated same as the Pear.

Gloxinias, Caladiums, and Achimenes (*H.*).—*Gloxinias*—Mr. Haines, Prince Leopold, Brilliant, Fanny Wilder, Monarch, Richard Thornton, Emperor of Brazil, Prince Arthur, Hon. Mrs. Yorke, Madame Patti, Miss Hannah da Rothschild, and Rev. A. H. Bridges. *Caladiums*—Chelsoni, Leplay, Vesta, Princess of Teck, and Princess Royal. *Achimenes*—Ambroise Verschaffelt, Chelsoni major, Nesida, Purpurea Magnifica, Longiflora major, and Sir Treherne Thomas.

Hardy Melon for Frame (*A Constant Reader*).—Turner's Scarlet Gem, though a highly-flavoured scarlet-fleshed Melon, is not suitable for a frame with little heat beyond that of the sun. Munro's Little Heath is the best Melon for an amateur with but a limited supply of heating material. A strong tenacious loam is most suitable for Melons. A compost of rather strong fibrous loam with a fourth of rotten manure well incorporated is best for Strawberries for forcing. They should be potted as firmly as possible. The best Pea for general crop is, to our liking, G. F. Wilson, but we should hardly like to restrict ourselves to one kind.

Peas Sowing in Trenches (*West Coast*).—You cannot have read the matter aright, for no one knowing anything of Peas would recommend them to be sown in trenches 2 feet wide and deep. What is said, we have no doubt, is to make trenches of the size named, and manuring well, working it well into the soil as for Celery, and return the soil to its original level before sowing the Peas. Everybody knows this practice to be good, especially in light poor soils. The best time to move Conifers is in early spring, say April, just when they are beginning to grow; and the same remarks hold good of evergreen shrubs, but they may be moved quite safely at this time and until they begin to grow; also in September after the growth is complete. What shrubs do you wish to propagate? To enumerate those which may be raised from cuttings would cause us to enumerate a majority of those in cultivation, no one, except a nurseryman, having half of them. Variegated Hollies are propagated by budding or grafting at the latter end of March, in April, or just when the stocks are growing, and by budding in July or early August. Really good bedding annuals are scarce. The names of some are given to-day in answer to another correspondent, but we give a list of those which may be raised from seed, and will be available the same season for bedding purposes. Dell's Crimson Beet, Cineraria acanthifolia, C. maritima, Echeveria metallica, E. secunda glauca, Oxalis tropæoloides, Perilla nankinensis, Pyrethrum Golden Feather, Ageratum Imperial Dwarf, Alyssum maritimum, Centaurea candidissima, Cerastium tomentosum, Cuphea platycentra, Lobelia speciosa, Nasturtium King of Tom Thumbs, scarlet, and the golden variety; Sapenaria calabrica, and white variety alba; Tagetes signata pumila, Tropæolum compactum coccineum, T. compactum luteum, Viola cornuta Perfection, and V. lutea major. The duration you may find in any catalogue.

Quantity of Gas Tar for Mixing Asphalt (*J. K.*).—We have not been particular to note the quantity of gas tar required for bringing to the consistency of mortar the ashes used for asphalting walks. As near as we can tell, about a gallon per square yard for a thickness of 3 inches. If any have noted the exact quantity of boiling tar required for mixing we should be obliged were it communicated.

Cucumber for Frame (*R. B. N.*).—Tender and True is probably the best of Cucumbers for quality. It or Blue Gown we recommend. Your frame will only accommodate one plant, planted in the centre; and upon a dung bed 3 to 4 feet high, with 10 inches of soil upon it, you will have a fair chance of success.

Sea-kale Crowns Decaying in Winter (*G. B.*).—We are unable to account for the decay of the crowns, though we apprehend it is in consequence of the seeding to which you allude, it being remarkable that the growth is good during summer. This is also past our experience—the root-stem to form eyes and shoots with abundance of flower stems the same season. The decay we believe to be only that of the flower stems, and small crowns below them are the true crowns, the growth of last year. Otherwise the decay of the crowns, and especially in light soil, is inexplicable.

Shrub for Centre of Raised Bed (*J. K.*).—A very suitable subject and very distinct is Abies excelsa glaubra-pilliana, a very close slow-growing Spruce, which for what you want ought to be about 2 feet 6 inches through, and to secure this size of plant the price will be more, perhaps, than you may wish to give. Thuja orientalis aurea is also suitable; but the cheapest and most tractable subject would be a green or variegated tree Box.

Smoke from a Brick Kiln (*A. B.*).—At a distance of 80 to 100 yards from a number of brick kilns we have seen gardening successfully practised, and the plants you name thriving at no greater distance than 50 yards; the smoke was taken off by a chimney. If the kiln be an ordinary one, twice the above distance will be necessary.

Roller Shading for Stove (*G. B.*).—There ought to be no difficulty with the shading by means of a roller, pulleys, and line, especially as it is an end house. The length is certainly considerable, but you might arrange to have it in two lengths. If you object to blinds you may brush the inside of the glass with whiting and skim milk, or a glue size if put on the outside, and this you may wash off or renew as required.

Names of Fruits (*J. Royle*).—1, Not known; 2, Beurré d'Aremberg; 3, Doyenné d'Alençon.

Names of Plants (*G. Aulger*).—We think No. 1 is Veronica agrestis, and No. 2 V. cymbalaria; but specimens should be sent in a box. (*A. R.*).—Your Orchid seems to be a form of Orchis fusca (O. purpurea); it has nothing to do with O. longicornu. (*W. T.*).—Cyperus alternifolius, and C. alternifolius variegatus. (*H. B., Prestbury*).—Cannot determine from specimen sent.

POULTRY, BEE, AND PIGEON CHRONICLE.

HOUDAN COCK TURNING WHITE IN ONE MOULT.

Have any of your readers known of a similar *lusus naturæ* as the aforesaid?

Mr. Cooper of Limerick, who is well known to all poultry fanciers in this country, has the gold medal Paris winner which has performed this feat. Had he been an old worn-out bird gradually growing white it could be easily explained, but for a bird in perfectly rich colour in one moult to turn pure white I think is not a matter of everyday occurrence.

As I have on two occasions awarded him prizes, and remember his rich dark colour as well as size and frame, my astonishment is great to find in one moult he has turned perfectly white, retaining all other Houdan characteristics. I suppose we shall have White Houdans in Variety classes now as well as White Crêves.—C. F. Staunton.

THE AGE OF DORKINGS.

In your last number Mr. Bartrum says, "I happen to have won the Dorking cup at the Palace in the Old class at the last two Shows;" but if Mr. Bartrum refers to the official prize list of this Show for 1873 he will find that Mr. Beachey was awarded a cup for the best hen in that year. Mr. Beachey's hen, though not sold at the auction, was afterwards claimed; and as Mr. Bartrum had told me that he did not breed his cup hen of the Palace and Bristol Shows last year, and Mr. Beachey at Bristol when going round the classes with me recognised Mr. Bartrum's hen as his old Palace bird, I thought I was justified in assuming that this same bird had twice won at the Palace, and that she was, on Mr. Beachey's authority, over eight years old. However, as Mr. Bartrum says this is not the same bird Mr. Beachey doubtless made a mistake, and I am sure he would be the first to acknowledge it.

I bought a Dark Dorking hen at the Crystal Palace in 1872 shown by Mr. White, which I afterwards ascertained from him had won the cup at Leeds in 1868. This hen I still have; she is alive and well and now laying, and must at the very least be seven years old.—T. C. Burnell.

CUP NOT OF THE VALUE STATED IN THE SCHEDULE.

It was stated in the schedule of the late Oxford Poultry Show, in a head-note to the list of cups, that the cups would be silver and of the full money value. In the list itself the cups were also described as silver. Thus far previously to the Show. At the Show a reprint of the schedule was published in the catalogue, and the same description of the cups was repeated. I of course relied upon the statements made, and entered, amongst others, a pen of Mandarin Ducks in the Variety Duck class. To this pen the cup was awarded, and it was subsequently sent to me. It proves to be, not silver, but *a plated article!* Will you tell me what you think of the matter, and what course I ought to adopt respecting it? I have informed the Secretary of the discovery which I have made, but he seems to think it a sufficient answer to say that the cup was a presentation cup. I shall be happy to let you inspect both the cup and the schedule, should you wish to do so.—An Exhibitor Misled.

[Whether it was a presentation cup or a cup offered by the Committee makes no difference. The Committee have failed to fulfil their engagement.—Eds.]

Poultry-keeping.—The following is my experience of poultry fancying during the last three months:—My stock of fowls consists of sixteen Brahma hens of 1872 and 1873; these have not distinguished themselves in any way but as food-consumers, and an occasional egg or two. I have also ten Brahma pullets and three Crève pullets hatched last March; these three last named began to lay at six months. From these thirteen pullets

I have had from the 21st of October to the 21st of January 533 eggs. They are liberally fed in much the same way as your correspondent states in the Journal of January 21st. Eggs have been so very scarce this season that I am inclined to think this great success. I should add that one of these pullets has sat without hatching owing to the extreme cold, and another is now sitting.—A Successful Contributor.

BRAHMAS AS EGG-PRODUCERS.

I notice a few remarks on Dark Brahmas, in the management of which "Ealing" appears to have experienced much better results than myself during the past year. I must, however, correct his idea of "intruders visiting the nests;" that is, I think, completely guarded against. The strain may have something to do with pullets' backwardness, though some of my older birds have at last commenced laying on the 18th; and on the 26th two of my pullets (these just turned eleven months old), where last year they began at seven months. I presume "Ealing" is able to give his birds a wide grass range during the day, which coupled with two feeds per diem I should expect would prove more satisfactory than three feeds under more confinement.—Agricola, *Liverpool.*

CRITICISMS OF AWARDS AT PORTSMOUTH SHOW.

I most fully appreciate fair and impartial reports of the various exhibitions, as also criticisms upon the awards; but, being one of the Judges at the late Portsmouth Exhibition, think a little more care should be taken by the reporter of your contemporary ere he make such remarks as the following: "Mr. Lingwood's Buff Cochins were remarkably distinguished by being not even commended." Now, had that reporter taken the slightest trouble he could have known that pen of Buffs arrived without any label, and two pens being empty, Nos. 40 and 41 (which I afterwards learned were Mr. Lingwood's and Mr. Tomlinson's), the Committee decided not to pen those birds until they could be certain to whom they belonged, therefore they were not in the pen when the awards were given in. There were other cases where birds were exhibited with wire or tape round their legs, consequently all such plainly-marked birds were passed over. Possibly, when the exhibitors heard such marks could not be tolerated they removed them, and visitors not knowing the reason might wonder why they were not noticed. If possible the reporter should interview the Judges, and thereby hear why this or that pen was passed before he impugns the judgment. Again, birds arriving after the class is judged should have cards "too late for competition" attached.—W. B. Jeffries.

DORSET SHOW OF POULTRY, &c.

This Show was held on the 27th and 28th January, and the building much reminded us of Oxford, the poultry being in the Corn Exchange below, and the Pigeons in the Town Hall above. The Show was a complete success in every way, the management being in the hands of Mr. Billett. The attendance was wonderfully good, the whole country around turning out to see the Exhibition. The Judges were advertised many weeks ago as being for poultry Messrs. Hewitt and Hodson; but, as we all are aware, the former gentleman has been too unwell for many weeks to judge at the different shows where he was expected, so Mr. Tegetmeier filled his place here. But we must say we think all shows which make a point of advertising their Judges should most decidedly also advertise who the substitutes are to be when they find that those engaged are, from illness or any other cause, prevented from attending. At Dorchester they certainly kept up the error even to putting on their catalogues that the Judges were Mr. Hewitt and Rev. G. F. Hodson, when they must have been aware, long before the catalogue was in the printer's hands, that Mr. Hewitt would unhappily not be able to be with them. We do most sincerely trust that committees will take the hint, and when their first advertised judge cannot come will by means of a public advertisement let the exhibitors (who have made their entries on the faith of a certain gentleman judging them) know who the substitute is to be, for it is well known that different judges have different opinions about birds, and that while some are crotchetty on some minor point, others think nothing of it.

At Dorchester, as at most good old-fashioned shows, *Dorkings*, the table bird of the people, opened the ball, and Mr. Whitworth won the cup with a grand old pair; the second also being fine. Silver-Greys were not good except the first-prize pair, while in Whites Mrs. Hayne cleared the board with three good pens. *Brahmas* (Dark) were good; Light not so fine as usual. In Darks the winners all were well-known birds, and well placed here. Lights were a large class, but winning was easy. *Cochins* were very good. They had three classes—Buffs, Partridges, and Any other variety. The cup pen of Buffs were grand. In Partridge we almost preferred the third-prize pen (Crabtree). In the next class the first Whites were a fair pen, but the cock seemed down on his legs and looked overshown. Mr. Woodgate had the best pen in the class, but the bird's tails had got crushed in coming, and one or two feathers were broken off, consequently the Judges decided to pass them by. Not knowing whether it was the result of accident or design, we were much surprised at this, for they stood out a long way the best, and it must have been clear to any judge, we should have thought, that "faked" tails would have been very different. We confess we saw no reason why in spite of the broken tails the birds in question should not have stood first. We frequently see such accidentally-broken tails in Spanish and Dorkings (notably so the cup hen at Bristol), yet they are not in consequence left out in the cold. The third prize in this class was not awarded; why we cannot conceive, for if there was a pen worthy of being highly commended, as there was (*vide* Mrs. Holmes), surely it was also deserving of third. *Spanish* were good, the cup pen well shown. The second prize-pen (Le Sueur) went on and won the cup at Portsmouth we believe, as too did Mr. Dring's highly commended pen of Crêves. *Game* were a good lot and well judged. The cup went to Mr. Jekin's Brown Reds. *Hamburghs* mustered fairly, but besides the winners, which seemed for the most part well placed, there was nothing much worthy of notice. *Polands* were capital, good Silvers of Mr. Hinton's taking first; White-crested Blacks second and third. *Malays* made a fine class, and the quality was unusually good. *French* also brought two good classes. The first *Houdans* were the first-prize Tunbridge Wells pen, and deserve their place. In the next class Crêves, La Flèche, and Crêves won in the order named. The Variety class was various and varied. Mr. Tegetmeier made, we thought, a most happy selection; perhaps we might have placed Mr. Long's Black Hamburgh third, but there was not much wrong. *Bantams* made large classes, Game especially good, and the Judges picked out the winners well. We are sure the most critical could find but little fault here. The Laced classes were conspicuous by the absence of Mr. Leno. We could not understand why this gentleman, who seems ubiquitous, should not have had a "go in" here where there were a Laced class and good prizes. In the Variety Bantam class good Blacks were first and second, and White-booted (not White-breasted as stated in catalogue) third. This latter pen was very white, but a trifle too large. The Sale classes were large, and many of the birds good and cheap.

Ducks were large classes mostly, and the quality capital, Mr. Fowler's cup Aylesbury being very fine. In Blacks the first drake was simply gorgeous in colour, but rather large by the side of Mr. Kelleway's. The Variety Duck class was one of the best we ever saw, pen after pen of surpassing excellence. The winners were beautifully shown and well selected for their places. We were again glad to see our friend Mr. Fowler's most useful Cayugas in the list. The first-prize *Turkeys* were old friends. Second and third also good. In *Geese* the winners were enormous, and ran in first.

There was a class for *Pheasants*, and a most beautiful one it was, we never remember a more charming sight. The pens too for them were large, and they were well attended to. First went to Reeves, a little shabby in tail, still well first. Second went to Japanese, a wonderfully good pair. The Gold and Silvers were beautiful. We much admired Lady Heathcote's pen, and almost thought them deserving of third place. There were also Pied. In fact it was one of the best classes ever seen.

Rev. G. Hodson and Mr. Tegetmeier judged the Dorkings, Brahmas, and Cochins together; then Mr. Hodson, we believe, took the Malays, French fowls, and Variety Bantams, while Mr. Tegetmeier did the remainder. This report was laid on one side by mistake, and hence the delay.

We published the list of awards and notes on the Pigeons last week.

THE BARB, OWL, &c.

I was much pleased in our Journal of January 21st with the remarks from the ever-welcome "Wiltshire Rector's" pen on Dr. Morgan's article on the Barb. With the Rector I admire the Doctor's writings very much. His descriptions of the Pouter and Fantail were admirable, but in my opinion he is not quite so happy in his last on the Barb, no doubt from not having seen the bird in its best form. As "Wiltshire Rector" remarks, the show Barb of America must differ a good deal from ours. The best Barbs are certainly not small natty birds such as Dr. Morgan would seem to wish them to be. The Tumbler style is bad. The best birds look really bigger than they are when handled, rather loose-looking in feather, with very long wings broad at the points. I think it is certainly a mistake to attempt to breed them down to a delicate point.

I cannot imagine how Dr. Morgan thinks the Barb and Carrier so like each other; unless in being both wattled birds they really have very little resemblance. If one could fancy the

birds alive with their heads off it would be easy to tell them at a glance, they are so unlike in shape, attitude, habits, &c. A good many years ago a few fanciers tried to push forward the Tumbler style, but, fortunately, they did not succeed. Black is, I think, the best colour for a Barb, or white if they could be got fine enough. Reds and Yellows never show so well, though as good as the others in points, and the colours are besides often not good. As to their having the same origin nothing can certainly be known now, as they are both very old varieties, and it would take Dr. Morgan, I am persuaded, a very long time to make the one out of the other; so I trust with the fancy talent he evidently has that he will rather take up one or both and set himself the task of improving them, which I feel sure he could do if he set himself to it.

Being in the scribbling mood I wish to say a few words more, but this time I am to be reluctantly in opposition to "Wiltshire Rector;" but I know well he will forgive me, though I may not be able to bring him to my way of thinking. It is about English Owls. A short time ago (I speak from memory) in one of his articles he said they were a nice variety of birds, and that they ought to be encouraged. Now here lies our difference. I think, on the other hand, that they are a lot of degenerate mongrels that ought to be extinguished at once. This, I think, must be quite clear to anyone who looks at the foreign Owls and the English, unless there are two standards for Owls, which I never heard was the case. Ours are beyond a doubt a degenerated form of the bird, quite as much so as our old Trumpeters in comparison with the new type as it is called (the old it should be). This I think is felt if not acknowledged by Owl-fanciers and breeders of the English sort, as it is quite evident that they are crossing with the foreign birds; but this ought not to be if there is a standard for the English bird. The best way to make an improvement would be to have only one class for Owls at shows. This would put good breeders on their mettle, and I am sure that within a short time as good home-bred birds could be shown as the foreign. The best foreign birds are really gems, and they must be good fanciers who can turn out such lovely birds. I tried them twice—I have such a fancy for them, but I fear our climate is against them; but in the south of England I cannot see what is to hinder them from succeeding. The hens with me never lived over the second winter. If those who have them would refrain from overshowing them, they would have a far better chance of succeeding in breeding them. This is one of the evils of shows. They often fall into hands that want them for nothing else, and so are lost to the fancy. I intended to have made a few remarks on Jacobins, but find this is already long enough, but may yet do so.—Bubo.

THE POULTRY-KEEPER.—No. 30.

PLUMAGE OF THE PENCILLED HAMBURGH.

The plumage of the Silver variety does not differ from the Golden variety except in the ground colour. The Silver variety is of a clear white, the Golden of bright chamois yellow. In the Silver the feathers of the hackle and the head should be of a pure white without the slightest spot (fig. 34), and that to the back and shoulders where the beautiful black markings begin, which show on the feathers of the back (fig. 35). These markings are repeated on the feathers of the shoulders, the covert feathers of the wings, on those of the breast and thighs; but the marks diminish a little in intensity of colour and neatness of form in proportion as the feathers get towards the under parts, and they end by becoming mixed on the sides and abdomen. The same markings are repeated on the covert feathers of the tail, the feathers becoming longer and longer in approaching the large sickles, the beginning of which they hide.

Fig. 34.—Hackle Feather

Fig. 35.—Back Feather.

The large wing feathers (fig. 36) are neatly but a little irregularly marked with numerous black cross marks. The large sickles have the more regular characteristi markings, and are very like the large covert feathers of the tail (fig. 37). The front of the neck is like the hackle, white, and forms with it and the head an entirely white part, which occurs in circles over the rest of the body.

Fig. 36.—Wing Feather.

Fig. 37.—Tail Feather.

THE MEALY POUTER.

"Alas! Hope is not prophecy. We dream,
But seldom does the glad fulfilment come."

Two days ago my attention was directed to a melancholy editorial article in the pages of a contemporary, whose hopes as to the ending of this subject have been evidently blighted. I should not have taken notice of this at all but for the cool presumption of its Editor, taking to himself the credit of legislating upon a matter which, only twelve months ago, he admitted to me that he knew nothing whatever about. He challenges me for my "cool claim to the credit of a proposal which we believe first came from ourselves." Why, I advocated the raising of this bird many years before the journal in question or its Editor was known to the fancy. As for having a class for this bird, that was debated by Mr. Ure and myself over and over again, when we were members of the North British Columbarian

Society, settled and carried out; and it was because the said Society excluded it altogether from their last Show, as well as the other so-called off-colours, that I felt constrained to take up the subject.

But the querulous Editor in question, it seems, must have something or somebody to blow at, and requests an explanation. My explanation simply is, that whether Mr. Wallace and his friends do or do not object to a class for this and the other colours before referred to, they certainly excluded it and them (as Mr. Wallace frankly admits) from their Show.

I am further found fault with for raising "an entirely different and distinct question." Well, what of it? Am I not at liberty to raise any question? Perhaps I have done so in the wrong journal. I have "professed" nothing, but have given facts, and intimated my own course for the future.—James Huie.

Dorset Show of Poultry, &c.—The cup for best pen in classes 17 and 18 at the recent Show went to Mr. Hinton's Polands. The first and cup for best pen of French fowls in the Show was won by Mr. W. H. Crabtree with his Crève-Cœurs. The fourth prize was won in class 28 (Selling Class, hens) by Mr. Prosser, and not by Mr. Hinton, as misprinted in catalogue; and third in class 54 went to Mr. W. Morris. We are informed that the moneys for prizes and sales were all paid within three or four days after the Show closed.

THE DRAGOON CONTROVERSY.

The suggestion of Mr. South in a contemporary is certainly worthy of consideration if the vexed question relative to the standard of a Dragoon is to be settled; though I much question whether all fanciers of the birds at present exhibited as Dragoons will ever become united, since on certain points they are directly opposed.

For instance, one "goes in" for the broad-headed bird, while another fancier eschews all that are not the very opposite in this respect—viz., long and narrow. Then, again, the judges—what a variation in their awards! Mr. A says, "A barrel head is the first point I look for in a Dragoon, and unless possessed of this, however good in other points, must be left out in the cold." Mr. B fancies a flat broad-skulled bird; and Mr. C picks out the large heavily-wattled fellow with short thick beak, while Mr. D selects the small, graceful, and lightly-wattled friend of the "Wiltshire Rector."

Sufficiently perplexing as this is, one gets deeper in the mist by noticing that a judge not unfrequently contradicts his previous judgment, and this in a very short space of time. It would be invidious to mention names, but I could give instances in which the same judge awards a bird the premier honour at one show, and at the very next exhibition at which he officiates (within a few days) the same bird is again exhibited; but mark the difference—only to be passed unnoticed! or at most receive the judge's prize "commended." Some may argue, "Want of condition would justify this otherwise unaccountable variation;" but the fact of the birds being in the same good condition as in the first instance completely nulls this argument.

Does not this alone prove the unsound footing on which the standard of the show Dragoon is at present based? Undoubtedly there are now many standards held up for the Dragoon, some very much opposed to each other, others only varying on one or two minor points. To reduce these many standards to one is the desire of all true fanciers of this most beautiful and much-abused bird; and what we have to consider is the most desirable manner in which to proceed. I for one, as I previously expressed, doubt very much whether this can be accomplished, and shall, in the event of its being necessary, give my vote for the recognition of two totally distinct standards. We must, in my opinion, countenance both the tight little, closely-wattled, narrow-headed "gentleman," so frequently and admirably described by "Wiltshire Rector," and the large, heavily-wattled, broad-skulled bird.

Then comes the question of Which is which? Which is to be called the Dragoon proper, and what is the other variety to be nominated? I would suggest for the consideration of my brother fanciers that the former retain the old name Dragoon, or English Dragoon, since this bird illustrates more fully the general descriptions of all the old writers upon the bird in question, and that the heavier bird be designated Horseman, or London Dragoon.

Moreover, I am of opinion that the classes would fill to a greater extent than they ever do at present were both birds placed on an equal footing. Committeemen, make a note of this, and provide classes at your next show for both varieties; we should not then see birds so totally different penned side by side for competition with each other.

There is another question worthy of the consideration of all committees, and that is, Why should not classes be provided for each sex of Dragoons, the same as for Carriers, Pouters, &c.? Everyone knows the Dragoon class is invariably larger and pays better than any other; sometimes the entry fees amount to double the amount of prize money offered for competition: they have therefore a right to receive better treatment. If greater inducement were held out for hens by thus providing classes as I have suggested, it would, I doubt not, be one means of making the Dragoon classes more uniform.

Hoping my brother fanciers will state their views through the medium of "our Journal," I beg to subscribe myself—Nottinghamshire Rector.

READING PIGEON AND CAGE BIRD SHOW.

The first Reading Show was held on the 3rd and 4th inst. in the Corn Exchange, a spacious, well-lighted, and comfortably-warmed building. There were 530 Pigeons, 300 Canaries, 78 British birds, and 55 foreign birds exhibited. All were excellently arranged and cared for, and the undertaking so great a success that we hope it will become annual. We regret to say that the awards in the Pigeon classes did not give general satisfaction, and after carefully examining them we were not surprised at the complaints we heard.

First on the list came *Carriers*, shown singly, in two classes, for cocks and hens respectively, of any colour; both classes contained a number of Blues, nice birds, though they could not compete with the superb Blacks and Duns shown. In cocks Mr. Fulton was first and second with grand Blacks; we rather preferred the general form of the second, though his wattle was not equal to the first. Two third prizes were awarded: Mr. Yardley's bird was a fine Black, with apparently a stiff wing; Mr. James's a Dun, a beautiful bird, but disfigured by an excessive growth of beak with the end apparently pared off. A nice Dun of Mr. Yardley's was very highly commended. In hens, too, Mr. Fulton was first with a dark Dun, and second with a Black, marvellously developed in wattle for a hen; third was an excellent Dun, slim and strong in form, not very large in wattle. *Dragoons* had two classes, and were divided in the same way as Carriers. Birds of all colours were shown; but the Judge seemed to have a partiality for one colour and for one type of bird—five out of the six prizes went to Blues, all birds quite devoid of wattle. This we think is to be regretted when there are two recognised types of Dragoons. In cocks first was a stylish Blue in form, but in our opinion not worthy of its position; second and third much alike, long-limbed Blues. Two good birds of Mr. Fulton's were left out, apparently for having too much beak, and two beautiful Blues and a Yellow of Mr. Baker's for the same reason. In hens, again, a Blue was first, a poor little Blue second, and a nice Yellow third. *Antwerps* had two classes, which numbered sixty-three and thirty-two birds. We could not see the principle upon which awards were made here, some of the winners being neither Long-faced nor Short-faced, and of no definite colour. The first cock was a nice-looking bird, pale Blue Chequer. Where the merit of birds chiefly consists in their performances on the wing it is impossible to criticise them fairly in a show room. The first-prize hen was in form like a Blue Rock, though dark blue in colour. Extra prizes were liberally given in these large classes. *Pouters* were shown in pairs, and very uncomfortable they looked in small pens; we hope to see them shown singly at the next Reading Show. Mr. Fulton was first with Whites and second with Blacks; a fine pair of Yellows were third, and Blues highly commended. *Tumblers*, Short-faced, had one class for pairs; the first winners were, as is generally the case, Almonds. They well deserved their position. Second were good Black Mottles; and third Agates. Mr. Fulton's and Mr. Yardley's highly-commended Almonds were both good, but the latter not well matched. *Fantails* were a splendid class. We could not comprehend the first award; doubtless the birds would carry their tails beautifully if they had them, but every feather was broken off about 3 inches from the roots. We know the birds, and know them to be good, but for all the Judge knew their tails might have been black. Second were coarse birds, but with large tails and fairly carried; third were small and nice Blues. Mr. Baker's commended Whites and Mr. Cresswell's highly commended pair should have been higher. *Trumpeters*.—A magnificent pair of Russian Blacks were first; second were Mottles, even better in points, but out of condition; third were far behind the other winners, fair in points, but very light splashy mottles in colour. Pen 247 (Baker) contained a single bird, a grand Black. Whites unfortunately are now but second-rate; two pairs were shown, one fair, the other very poor. *Magpies* were fortunate in having a class to themselves, which was denied to Barbs, Jacobins, Owls, and Turbits. Cleanly-cut Blacks were first and far ahead. Black seems the natural colour of a Magpie, and Reds and Yellows but abnormal varieties. Second went to Yellows, third to Reds. Any other variety class was a most interesting one from the unusual number of popular breeds relegated to it. Much grumbling over the awards in this class was heard; but a Judge may be pardoned for peculiarities in placing so many and such excellent specimens. Extra second and third prizes were most properly given. First were Yellow Barbs, confessedly fine

birds, but the cock coarser than we like, and far larger than the hen. The second went to Blue Owls, called English, but evidently a cross between English and African, or at least with much African blood; and to a pair of Black Shell-crested Turbits, not nearly so good as an unnoticed pair of the same variety. The third were a pretty pair of Blue Priests, and a pair of White foreign Owls; why entered as Jacobins we do not know. This growing habit of sending birds other than those entered is most inconvenient for absent exhibitors, and most misleading to novices. We think that birds so sent should be disqualified after due announcement of this regulation in the schedule. Mr. Baker, who won the point cup, seemed determined not to be beaten, and sent many lovely pairs to the Variety class, including White Jacobins and Turbits, nearly all wrongly entered in the catalogue. A rich-coloured pair of Archangele, evidently two cocks, were properly passed over. The Selling class was not remarkable; a soft pair of Ice were first, a bargain for some one; fair Blue Priests and Nuns also in the list.

The silver cup of five guineas for the greatest number of points in Classes 17 to 30 was awarded to Mr. J. Adams; and the Mayor's cup, value £3 3*s.*, to Messrs. G. & J. Mackley.

A show of *Cage Birds* is always attractive to the general public, to ladies in particular, and that at Reading seemed so especially, from the number of local exhibitors. How wonderful is the colour of Canaries dieted on the new *régime!* A new-fashioned Canary among the old is like an orange among lemons.

Belgians were poorly represented, but every variety of English Canary was there in force. The Mules were particularly handsome, the first-prize light-coloured one of the prettiest of the kind we ever saw. Goldfinches and Linnets filled large classes—happy little birds, which looked as if they had never known and never wished for more space than their cages gave. The class for Any other variety of British birds was most interesting; Magpies, Jackdaws, Owls, Bramblefinches, Blackbirds, and others were there. Some blue Titmice in a quaint artistic habitation of cork were scarcely visible for the crowd round them. In Parrots the first prize went to a marvel of loquacity; some seventy of the bird's sayings were written down. A grand white Cockatoo of the venerable age of thirty-six carried all before it in the foreign Variety class; and Mrs. Holmes showed a Mocking Bird, to which an extra prize was given, in lovely plumage, but provokingly silent, in spite of our endeavours to excite him. A Parakeet, exhibited by Mrs. Monck, of Coley Park, Reading, much amused the visitors by piping "Merrily Danced the Quaker's Wife."

All the birds were so arranged as to be seen with comfort and to advantage. We hope to have another and equally pleasant day at Reading Show next year.

The following are the awards :—

CARRIERS.—*Cock.*—1 and 2, R. Fulton, London. 3, H. Yardley, Birmingham; J. James, Bath. *hc*, H. Yardley; R. Payze, jun., Wood Green (2); J. James; J. Baker, Kew Bridge (2). *c*, E. C. Stretch, Ormskirk (2); J. James; J Baker. *Hen.*—1 and 2, R. Fulton. 3, J. James *hc*, H. Yardley; R. Payze, jun.; J. James (2). *c*, R Payze; J. James; H. Yardley.

DRAGOONS.—*Cock.*—1, Powell & Crane, Oxford. 2, H. Yardley. 3, A. McKenzie. *hc*, H. Yardley; W. R. Pratt, Oxford; C. A. Pearson, Liverpool. *c*, G. Packham, Exeter; R. Fulton; A. McKenzis. Liverpool; W. V. & J. M. Longe, Ipswich; J. Baker. *Hen.*—1, Powell & Crane. 2, W. V. & J. M. Longe. 3, R. Fulton. *hc*, H. Yardley (2); A. McKenzie; E. Durrant, Tunbridge Wells; J. Baker. *c*, H. W. Wren, Lowestoft; J. Baker.

ANTWERPS.—*Cock.*—1, A. R. Burrel, Cambridge. 2, Scragg & Valters, Oxford; W. R. Pratt. 3, W. G. Flanagan, Reading; A. T. Withers, Reading. *hc*, H. W. Weaving, Oxford; F. P. Bulley, Oxford; S. L. B. Smith, Sydenham; W. G. Flanagan; C. G. Butler, Reading (2); C. H. Buckland, Reading; Powell and Crane. *c*, H. W Weaving; H. Yardley; F. P. Bulley; C. G. Butler. *Hen.*—1, J. Taylor, Reading. 2, W. R Pratt; W. Ellis, Leeds. 3, H. M. Turner, Oxford. *hc*, C. W. Billett, Southampton; W. Norris, Newbury; C. H. Buckland; G. P. Palmer, Caversham. *c*, F. G. Russell, Blackheath; S. L. B. Smith (2); A. R. Burrel; T. Holmes, Lower Sydenham; E. C. Stretch (2); W. G. Flanagan; C. G. Butler.

POUTERS.—1 and 2, R. Fulton. 3, J. Baker. *hc*, H Yardley; J. Baker.

TUMBLERS.—*Short-faced.*—1 and *c*, J. Baker. 2, R. Fulton. 3, H. Yardley. *hc*, H. Yardley; G. Packham; R. Fulton; W. R. Pratt; J. Baker.

FANTAILS.—1, 3, and *c*. J. Baker. 2, J. F. Loversidge, Newark. *hc*, H. Yardley; J. F. Loversidge; O. E. Creswell, Early Wood, Bagshot; J. Baker.

TRUMPETERS.—1 and 2, R. Fulton. 3, J. Baker. *c*, W. G. Flanagan; J. Baker.

MAGPIES.—1, T. Homes. 2, G. J. Dewey, Gloucester. 3, J. Baker. *hc*, J. T. Hincks, Leicester; J. Baker. *c*, W. Tedd, Erdington (2); Powell & Crane; F. S. Barnard.

LOCAL CLASS.—1, C. G. Butler (Antwerps). 2, J. Roberts, Reading (Antwerps). 3, Mrs. Blagrave, Reading (Black Swallows).

ANY OTHER VARIETY.—1, J. Baker (Barbs). 2, H. W. Weaving (Blue English Owls); J. Baker (Turbits). 3, G. Packham (Priests); J. Baker (Jacobins). *hc*, H. Yardley (Barbs) (2); O. E. Cresswell (Jacobins); J. Baker (Jacobins and Nuns); R. Wilkinson, Guildford (Archangels). *c*, F. P. Bulley (Silver Owls); L. Lawson, Preston (2); J. B. Hicks, London (Pigmy Pouters); J. Baker (Foreign Owls).

SELLING CLASS.—1, H. Yardley (Toys). 2, W. Morris, Ross; J. Baker. 3, H. Yardley (Toys); G Packham (Nuns). *hc*, F. B. Cuble, Farnborough (Nuns); W. H. Edwards (White Dragoons); F. Skey, Reading (Starling); T. Kinchin, Reading (Baldheads); G. P Palmer (Antwerps); C. Etheridge, Reading (Magpies). *c*, B. W. Weaving (Antwerps); E. A. Thornton, Hull (Tumblers).

SPECIAL FLYING CLASS.—*Homing Antwerps.*—*Cocks.*—1 and 2, H. W. Crosse, Kensington, London. 3, G. P. Palmer. *hc*, C. C. Butler (2); W. E. Butler (2); G. Gillingham, Reading. *c*, F. G. Harris, Newbury; C. G Butler; H. Dibley, Reading. *Hen.*—1, H. W. Crosse. 2, T. T. Cooper, Swallowfield, Reading. 3 and *c*, C. G. Butler. *hc*, C. G. Butler; W. E. Butler, Reading.

CANARIES.

BELGIAN.—*Clear, Ticked, or Variegated*—2 and 3, R. Hawman, Middlesborough. *Clear, Ticked or Variegated Buff.*—2 and 3, J. W. Savage, Guildford.

NORWICH.—*Clear Yellow.*—1 and 3, J. Athersuch & Son, Coventry. 2, J. Adams, Coventry. *hc*, J. Athersuch & Son; J. Adams (2). *c*, G. & J. Mackley, Norwich (2); Moore & Wynne, Southampton; G. Cox, Northampton. *Clear Buff*—1, W. Pratt, Leicester. 2, J. Athersuch & Son. 3, J. Adams. *hc*, J. Athersuch & Son; J. Adams; G. & J. Mackley.

NORWICH.—*Evenly-marked Yellow.*—1, Brown & Gayton, Northampton. 2 and 3, G. & J. Mackley. *hc*, G. & J. Mackley; Moore & Wynne. *c*, J. Adams (2). *Evenly-marked Buff.*—1 and 2, J. Athersuch & Son. 3, J. Adams. *hc*, J. Athersuch & Son; J. Adams (2); G. & J. Mackley.

NORWICH.—*Ticked or Unevenly-marked Yellow.*—1, 2, and 3, J. Athersuch and Son. *hc*, J. Adams (3). *c*, G. & J. Mackley. *Ticked or Unevenly-marked Buff.*—1, 2, and 3, J. Adams. *hc*, J. Athersuch & Son (2). *c*, G. & J. Mackley (2).

NORWICH.—*Crested Yellow.*—1, 2, and 3, G. & J. Mackley. *Crested Buff.*—1 and 2, G. & J. Mackley. 3, Martin & Griffin, Southampton. *hc*, J. Moffatt, Bethnal Green, London; R. Hawman; G. & J. Mackley; Moore & Wynne. *c*, Martin & Griffin; S. Stratford, Northampton.

LIZARDS.—*Golden-spangled.*—1, 2, and 3, T. Fairbrass. Canterbury. *hc*, J. Athersuch & Son; W. Badcock, Reading; T. Fairbrass. *c*, J. Athersuch and Son; T. Fairbrass (2). *Silver-spangled.*—1, 2, and 3, T. Fairbrass. *hc*, S. Bunting, Derby; T. Fairbrass (3). *c*, G. & J. Mackley; S. Bunting; T. Fairbrass.

CINNAMONS.—*Jonque.*—1, J. Adams. 2, J. Athersuch & Son. 3, G. F. Dunn, Basingstoke. *hc*, J. Adams (2); C. H. Legg, Derby. *c*, W. Weston, Warddington. *Mealy.*—1 and 2, J. Adams. 3, G. & J. Mackley. *c*, J. Adams (3); G. and J. Mackley; C. H. Legg.

VARIEGATED MULES.—1, G. & J. Mackley. 2, R. Hawman. *hc*, G. & J. Mackley; J. Moore, Boston. *c*, J. Adams; S. Bunting. *Dark.*—1 and 2, R. Hawman. *hc*, G. & J. Mackley; S. Bunting; Moore & Wynne. *c*, J. Adams; C. H. Legg.

SIX CANARIES IN ONE CAGE.—1 and *hc*, J. Adams. 2 and 3, G. & J. Mackley, *c*, C. H. Legg.

SELLING CLASS.—1, G. Cox 2, J. Adams (Norwich). 3, G. & J. Mackley (Norwich). Extra 3, C. H. Legg (Variegated Cinnamon and Broken-capped Silver Lizard). *hc*, J. Adams (Norwich); R. Hawman (Jonque Cinnamon); G. and J. Mackley (Norwich); S. Bunting (Goldfinch Mule); R. Bishop; C. H. Legg (Cinnamon); L. Williams, Reading (Golden Lizard). *c*, G. & J. Mackley (Norwich); H. Pyke, Reading (Green Pied).

LOCAL CLASS.—1, J. Weston (Yellow Norwich). 2, F. J. Crapp, Reading. 3, T. Fife, Reading (Clear Yellow Norwich) *hc*, H. Gregory, Reading (Yellow Belgian); H. Pyke (Ticked Yellow Norwich); T. Rogers, Reading (Variegated Yellow); F. J. Crapp (Yellow Norwich) (2); L. Williams (Ticked Yellow). *c*, T. Pullen, Reading (Green); T. Fife (Norwich) (2); F. J. Crapp (Ticked Yellow).

BRITISH BIRDS.

GOLDFINCH.—1, S. Bunting. 2, C. H. Legg. 3, E. Cawston, Caversham. *hc*, H. Gregory; R. Hawman; G. Cox. *c*, E. Cawston; J. C. Bamber, Preston (2).

BROWN LINNETS.—1, R. Hawman. 2, G. & J. Mackley. *hc*, J. Adams. *c*, S. Bunting.

ANY OTHER VARIETY.—1, G. & J. Mackley (Blackbird). 2, M. Butler, Reading (Magpie). 3, J. Robinson, Reading (Thrush); J C. Bamber (Bullfinch). Extra, W. Nobbs, Reading (Skylark) *hc*, F. Wheatley, Reading (Thrush); Miss B. Cole, Reading (Blackbird); W. Nobbs (Thrush); T. Ashton, Reading (Thrush); E. Salmon, Reading (Skylark); S. Bunting; W. Bedford, Reading (Owls); G. Cox. *c*, W. Dorchester, Reading (Bullfinch); Miss M. A. Robinson (Thrush).

FOREIGN BIRDS.

PARROTS.—1, W. Exall, Reading. 2, Miss A. Brooke. 3 and *c*, G. & J. Mackley. *hc*, M. Butler; Mrs. Monck, Reading; Mrs. M. A. Chapman, Reading; Mrs. Giles, Reading; Mrs. E. Silver, Reading.

ANY VARIETY.—1, J. Whatley (Cockatoo). 2, S. Bunting (King Parrot). 3, Mrs. Monck (Parakeets). Extra, Mrs. J. T. Holmes, Bath (Mocking Bird). *hc*, Mrs. J. T. Holmes (Cockatoo); Miss M. A. Robinson (Ring-necked Parakeet). *c*, G. Chancellor, Reading (Budgerigars); G. & J. Mackley (Parakeets and Java Sparrows); Miss M. A. Robinson (Rose-crested Cockatoo); L. Williams (Australian).

JUDGES.—*Pigeons:* Mr. Harrison Weir. *Canaries:* Mr. A. Wilmore.

DRONES.

DRONE bees do seem very worthless stupid creatures, and never get a good name from anybody. They are graceless, mannerless, and shiftless. Drones of all kinds bear characters which are not inviting and attractive. Drone bees are lazy idle creatures beyond compare. Though they are stronger in build and body than either queens or working bees, they will die of want rather than work. Born in scenes of great activity and industry, and amongst communities of self-sacrificing workers, drones seem quite unaffected and uninfluenced by example, and remain apathetic and insensible to all around them but food and sunshine. They do seem to enjoy a warm noon-day excursion. Indolence is the great characteristic of drone bees. Having no weapons of defence they are naturally cowardly and helpless. They are very unfortunate creatures, and no right-minded person can study their history without feeling a touch of commiseration for them. To the naturalist the history of drones is most interesting. The immediate cause of their sex is shrouded in mystery, and their end is tragical to a degree. The queen lays both male and female eggs. The male eggs hatch into drones only, whether set in drone or worker cells, and female eggs hatch into workers, but can be converted into queens in royal cells. Many writers tell us that the eggs laid by a queen are differently treated in passing through the oviduct, that all eggs touched by the contents of the spermatheca become female, and that those which pass untouched are male—in a word, that all are male till some become femalised in passing the duct of the spermatheca. Whether this is a fact or a mere hypothesis we are unable to say; but in either case it is wonderfully mysterious. If it is a fact, the sex of drones remains unchanged from the formation of the eggs, while the sex and superiority of workers are determined by the application of the contents of the spermatheca in the body of the queen. Drones, then, are drones from deprivation before the eggs are laid.

Male eggs are generally deposited in drone cells. Is it not wonderful how queen bees know when they are going to deposit male and female eggs? And if they do not know this, is it not equally wonderful that the working bees know how to distinguish the male from the female eggs after they are laid?

In trying to fathom this great mystery a writer on the sub-

ject suggests the possibility of the narrow cells of worker-comb being the cause of the difference of sex; that these narrow cells compress the abdomens of queens in the act of laying, and thus press the contents of the spermatheca against the eggs; whereas the drone cells, being large, produce no pressure. The writer in question does not know that many eggs female in character are laid in almost all hives containing swarms on the foundations of cells before their sides are erected at all. In such cases there can be no pressure whatever on the abdomens of queens in laying eggs, and yet the eggs laid on these foundations hatch into workers.

Much has been written about queens laying female eggs for months, and then commencing to lay nothing but male eggs. If the writers had possessed accurate knowledge of the producing cause of the difference of male and female eggs they would not have written as they have done. We have never in our experience found a queen suspend the laying of eggs in worker cells for days in order to lay eggs in drone cells. We have no doubt at all that both kinds are laid by one queen on the same day. Drones are twenty-four days in their cells, and workers twenty-one days. If a strong hive be bereft of its queen the workers are being hatched and born every day for three weeks, and all the drones are not hatched till the twenty-fourth day.

The function of drones is to pair with queens and thus perpetuate the race of bees. There is produced in the swarming season a marvellous superabundance of drones in almost every hive. But if the importance of the fertilisation of queens be considered, and the limits of time in which it should take place (within ten or twelve days after queens are born), an abundant male population is perhaps a wise provision in an uncertain climate like that of Great Britain. If the weather be unfavourable during the early days of queens, many of them fail to be mated by drones and are worthless. But queens timely fertilised commence to lay in a few days afterwards, and in about ten days after egg-laying has begun by fertile young queens the bees commence to worry and kill the drones. The poor unfortunate creatures are driven from the provision cells by their merciless masters, whose deadly intentions become more manifest every day, till a scene of carnage takes place painful to witness.

Recently drone traps have been introduced to assist the bees in ridding hives of their condemned drones. We have one which does the work of trapping very well, but we seldom use it, for it hinders and confuses the bees at work during the best part of the day for honey-gathering; and then there follows the trouble of killing the drones that have been trapped. We try to select stocks in autumn that have but little drone comb in them, and when any that are selected have drone combs near their centres these are cut out, and worker combs are fitted in their places. In this way hives may be kept from having too many drones.—A. Pettigrew.

SWARMS AND BAR-FRAME HIVES.

Mr. Pettigrew cannot have read what he calls "the literature of the bar-frame school" with much attention if he cannot remember any results of swarms. I can find abundant results chronicled. Mr. Pettigrew implies that swarms spend their first year in making combs, was a statement made by Mr. Cheshire. I have read all Mr. Cheshire's articles again, and they contain no such expression, but I find one which says, speaking of a swarm which came off April 28th, 1872, "On July 15th in—*i.e.*, eleven weeks, the swarm had not only filled the hive but had also thoroughly filled and sealed a large super with beautiful comb. It was on that day removed and found to weigh 44 lbs. nett. A smaller super of glass was now put upon the hive, and on August 15th removed, containing 10 lbs. nett, making 54 lbs. nett from a swarm which was left with a hive so full of store that stimulative feeding in 1873 was prevented, as it would have crippled breeding." This hive the next year gave four swarms, all of which wintered well, and one filled a super. Now if Mr. Pettigrew turns to Class 13 of the British Bee-keepers' Association's Crystal Palace Catalogue (in case he has not a copy I now post him one), he will see No. 114, 38 lbs., one of two supers same size from a swarm of Ligurians, 1874; No. 115, 44 lbs. from a swarm of black bees, 1874; No. 119, 43 lbs. from a swarm of 1874. And these were not the only ones. Following Mr. Pettigrew's way of calculating, the weight of the hive contents must be added, which will augment the gross weight to more than the 100 lbs. desired. A filled super from a bar-frame hive is not at all uncommon, even although we have no heather to send them to, which will make a material addition.

Mr. Pettigrew asks for the result of my harvest. I answer that through the force of circumstances I was obliged to discontinue bee-keeping for a year or two, and began last season with two stocks only, from which I had no surplus; but then they were in skeps, from which I am thankful to say they were as soon as possible safely transferred to Woodburys, afterwards ligurianised, and then made use of for queen-breeding and experimental purposes, so that they had no fair chance, and therefore the skeps are not wholly to blame.

The columns of the back volumes of the *Journal of Horticulture* will give other instances of supers from swarms in bar-frame hives, if Mr. Pettigrew wishes for further evidence. With regard to the slinger, if Mr. Bagshaw had fairly tried its power in extracting heather honey and found it fail, what was the use of Mr. Pettigrew inviting bee-keepers to see him try the same experiment which he knew would not succeed? Referring to your correspondent's extract from Mr. Cheshire's article as to the colour and value of extracted honey, the quotation should go a little further and add, "But notwithstanding these slight drawbacks, so great is the economy to the bees and so, too, ourselves, in preserving the combs, that the balance in favour of slinging is very large indeed. As much as 600 lbs. have been taken in one year from a single stock in America." Now it is obvious that if the honey is slung from sealed cells only (of course with the seal shaved off), it must be identically the same as if run out uncontaminated by brood; but if unsealed honey is extracted a certain amount of evaporation (very little) will take place, but there is no loss of quality, and no colour will be imparted to it that it would not have had if the other process had been followed.

The relative value of extracted and run honey has not yet been determined in England, as we have used the extractor but little at present. At the Paris Exhibition last year extracted honey was quoted 1 franc per half kilo, and run honey 90 centimes; so, then, our neighbours, who are generally allowed to have the organ of taste pretty well developed, prefer the extracted. In America the case is reversed, and their method of procedure will perhaps explain this, as also why the honey would sometimes be dark-coloured. Across the Atlantic the following practice is commonly pursued:—Two hives containing strong stocks are selected. From No. 1 the whole of the bees with their queen are driven, making what we may call a strong swarm. The crown board is removed from No. 2, an adapter substituted, and No. 1 minus its floorboard is placed full of combs and brood in all stages on it, the bees in which swarm up, and hatch-out in due time all the brood. By the time this is done, the queen of No. 2 having been breeding all the time, the hive contains an immense population, who then, used to the super as they have become, immediately work their hardest to store the empty combs with honey, and as fast as they do so, without waiting for sealing, the bee-master empties them with his extractor, replacing again to be filled. It will thus be perceived that from such a hive all the honey is obtained from combs which have been well used, and perhaps thereby have gained the undesirable dark tint.—John Hunter, *Eaton Rise, Ealing.*

DEPRESSION OF HIVE FRAMES.

Mr. Pettigrew, in the Journal of November 5th, pointed to the removal of the bottom rail in frames for bar hives as an improvement. I replied, stating that I regarded the bottom rail as essential, and gave the reasons for my opinion, adding, as matters of experience, that the bar occasionally sank beneath the weight of comb and bees it had to support; that in the absence of the bottom rail the sides would be splayed against the hive wall and there attached; and that, further, the combs are sometimes built down to and fastened to the floorboard. December 17th, "Pecchione" disputes the facts adduced, and asks as follows:—"Will Mr. Cheshire tell us if the contingency he predicts with regard to the so-called bar-frame without the bottom rail is grounded on any actual fact, or is it a mere idea of his own?" I answer (December 31st), that "I have not a few instances in which the sinking is at least double of that upon which I based my calculations," and explain that I cannot then give the exact measurements, because the low temperature precluded an examination. I have since, however, ascertained them exactly, and find the greatest sinking 0.32 of an inch—rather more than three times the amount suggested. I can add, moreover, that the frames in which these depressions had occurred were seen by Mr. Abbott during 1873, when he asked whether the frames were those he supplied with the hives, to which he received a reply in the affirmative.

"Pecchione" in his last thanks me for an offer that was never made, of assistance in trigonometrical calculations, and then re-asserts "That it is impossible for bees to depress the bars as stated. A bar might warp from fault in the wood, but not from weight of the bees," &c.; his reason being (*vide* his letter), that as the weight is extended along the bar it must necessarily give a certain amount of strength.

Does "Pecchione" not know that if a plank be supported at each end it will sag by the weight of the wood it contains, and which is evenly distributed through its length? To talk of extension of the bees giving a certain amount of strength, is not to talk with reason but against it. If "Pecchione" be right, a straw supported at its ends will bear a swarm extended along it. It is next suggested that the case I instanced of bees attaching their comb to the floorboard might have arisen from careless manipulation. I can only say, that of those hundreds who saw me manipulating at the Palace Show, I hope but few

will think this probable. The question of ventilation is next touched. As I have written more than any other bee-keeper on the scientific bearings of this question, I refer to what I have already advanced, stating my willingness to debate with any who approach me in a friendly manner any proposition laid down if the object be the advancement of our hobby, but declining to discuss with one whose animus is so evident, and whose logic is so much at fault as to say, "I suppose Mr. Cheshire will allow that the heat in a hive is generated by the bees, as warm air is lighter than cold." I certainly allow the first, but not on account of the second.

"PECCHIONE" then adds, "Mr. Cheshire appears to be singularly erratic in his condemnation of hives, and I would like to know how he can reconcile his letter in the 'British Bee Journal,' pages 186, 187, and 188, with his letter in the *Journal of Horticulture*." I have condemned no hives, and if my letters are not reconcilable why does not "PECCHIONE" cite an instance? The subjects of the two letters are as little connected as the Baltic and the Mediterranean. I challenge anyone to show that they clash. Did they, I would not hesitate to acknowledge it, since I think it no discredit to admit that I may be wiser to-day than I have been in the past. "PECCHIONE" then says, "May I be allowed to explain that, if my memory serves me, the hive which Mr. Cheshire claims as his consisted of a combination of several gentlemen's ideas, and because the one improvement does not exist in his (?) he condemns it." Was ever a charge made with such a proviso?—"if my memory serves me!" I can afford to leave the decision with those who judge from knowledge, and would shrink from detraction upon dubious memory. That I carried off all the new-invention prizes at the Crystal Palace is a sufficient answer to the ungenerous insinuation, the utter baselessness of which I may at a future time clearly show by an explanation of the hive. The frame without the bottom rail, however, had its birth across the Atlantic, and was illustrated in the "American Bee-Keepers' Magazine" in 1872.

"PECCHIONE'S" last sentence is, "Why does not Mr. Cheshire send his hive to the Editor of the 'British Bee Journal,' as he promised to do?" Am I to submit to the questioning of one hiding himself behind a *soubriquet* as to my relations with a journal totally disconnected from the one in which the question appears? This correspondence must close, so far as I am concerned, by my stating that I am not aware of having made any promise to the Editor of the "British Bee Jonrnal."—F. CHESHIRE, *Acton, Middlesex.*

[This controversy must now close.—EDS.]

EGGS IMPORTED.—The import of these in 1844 amounted to less than 68 millions, but in 1874 to more than 680 millions. We paid less than a quarter of a million sterling for foreign eggs in 1854; in 1874 we paid nearly two-and-a-half millions for them.

OUR LETTER BOX.

HEN-COOP (*G. R.*).—The dimensions of Mr. Lingwood's model hen-coop are as follows:—Width, 2 feet; depth, 2 feet; height to the top of the roof, 2 feet 3 inches. This size would of course be for the large breeds, such as Dorkings, Cochins, or Brahmas; for Game and Hamburghs they should be made smaller, and for Bantams only half the size. The large size can be made by any carpenter for about 14s.—T. C. BURNELL.

FEATHER-EATING FOWLS (*B. W.*).—We have repeatedly replied that we know of no remedy. An American writer says a net full of hay hung up for the birds to pick diverts them. They only acquire the habit in confinement. We have sometimes lessened the habit by supplying the run with a barrow-load of fresh earth mixed with grass. We have also given fresh horse dung with advantage. Lettuces are very good, especially if they are run to seed. Nothing, however, has ever overcome the habit, and we should be delighted to know a cure. It begins about this time and lasts till after the moulting: they are then safe until the next spring.

PETTIGREW'S HIVES (*Jane*).—The hives used by Mr. Pettigrew are 16 and 18 inches wide, and 12 inches deep, inside measure. In future he will purchase none less than 14 inches deep, the sizes he now recommends.

THE COLOURS OF CANARIES (*Ornis Aghalee*).—The terms Jonque, Yellow, and Golden are applied to the deeper or richer-coloured Canaries; and Buff, Mealy, and Silver to others. Cinnamon birds, of which there are two colours, do not approach in any degree to the appearance of any of the feathers in the five packets sent. Cinnamon-coloured birds resemble more the spice sold by that name. Had we your birds to examine instead of the small clippings of feathers, it would have been much more satisfactory to us, but the Irish Sea betwixt us was, no doubt, the cause why we did not see your birds. The diminutive detached feathers of Canaries examined singly is no small matter to study, more especially when we found some of them possess an artificial appearance, as though they were impregnated with a colouring matter. When we opened packet No. 4 we opened our eyes wider, although our vision is strong. We suggested to ourselves the question—"Pepper?" No! Further examination dispelled the idea. Upon the webbing of the part of feather from the right wing of the Canary distinct patches of colour were very distinctly visible. This is quite unnatural. The tail feather from the left side was also of very high colour. The small feathers taken from the body of the bird were likewise of strong colour. We carefully examined each packet. No. 1, To all appearance the feathers from a blooming Buff or Mealy hen Norwich. No. 2, Feathers from a Mealy bird, but not an entire Green specimen, as two or three light-coloured small body feathers were mixed with the dark ones. No. 3, Apparently from a Jonque Green, the feathers being stronger in colour, but, like No. 2, not of a decided green to qualify the bird being shown in a Green class, owing to a small light-coloured feather being amongst the rest sent. Green birds vary much in appearance. A Norwich Green is a very different bird to those exhibited at some of the north of England shows. No. 4, Feathers of exceedingly high colour. At first sight we imagined them to have been taken from a very high-coloured Yellow specimen. We tested the greater portion of the feathers, and finding two or three of the small body feathers to be tipped with a mealy fringe, we are inclined to think they have been taken from a strong-coloured Buff cock bird. After our test the portion of the feathers tested appeared of a very different and much paler colour to the others, which appear the same as when forwarded. No. 5, Feathers from a Variegated kind, but would not make a very showy bird, owing to its being so very heavily variegated, and, as you state, a hen. If any of your birds have been washing in, or had access to, any colouring fluid, do not exhibit them.

MOVING A HIVE (*W. S.*).—It is always advisable in removing hives from one site to another to wait until the spring, when the bees have attained vigorous flight. It is even then prudent to proceed cautiously, shifting the hive gradually a very few feet at a time, allowing a period of at least one good working day to elapse between each removal. In first moving a hive from the bee-house, stand it exactly in front of its previous entrance, where it can be easily seen by the bees, afterwards shifting it a little right or left as may be required. By these precautions removal may be effected with little loss.

DISTEMPERED TERRIER (*Alpha*).—We know of no cure; and the treatment differs according to the symptoms.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

DATE. 1875. Feb.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	IN THE DAY. Shade Temperature. Max.	IN THE DAY. Shade Temperature. Min.	IN THE DAY. Radiation Temperature. In sun.	IN THE DAY. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 3	29.918	37.7	37.1	N.W.	38.2	42.4	31.9	47.0	30.2	—
Th. 4	30.006	31.9	30.5	N.	38.0	41 8	28 8	75 1	26.1	—
Fri. 5	30 356	9 .0	30.0	W.	37.0	38.5	27 8	63 9	25.7	—
Sat. 6	30 326	29.0	28.0	N.W.	36.8	40 1	26.0	66 2	25 9	0.120
Sun. 7	30 167	37.8	37.7	E.	36.6	39 8	27.8	42.9	27 8	0.010
Mo. 8	30.223	31.8	29.3	S.E.	37 1	34.7	29.3	54.1	27 8	0.010
Tu. 9	30.133	29.6	29.6	N.E.	36 8	34 0	27.8	39 2	27.3	—
Means	30.161	32.4	31.7		37.1	38.7	28.5	55.3	27 3	0.140

REMARKS.

3rd.—Dark morning and dull all day, but no rain fell, and it was starlight at night.

4th.—White frost in the morning; beautifully bright all day and night.

5th.—Rather hazy the early part of the day; damp and cold in the after part.

6th.—Foggy damp morning, splendidly bright at noon, but a wet night.

7th.—Dull and damp, though not rainy morning; a slight shower just after noon, fair but not bright afterwards, and much colder towards night.

8th.—A fair but frosty morning; very fine in the middle of the day; cold and frosty throughout.

9th.—Cold morning; snow at 9 A.M. quite covering the ground, but soon ceasing and disappearing; fair the remainder of the day.

Temperature very much lower than last week, and frost every morning. The snow of Tuesday was not of a measureable amount.—G. J. SYMONS.

COVENT GARDEN MARKET.—FEBRUARY 10.

QUOTATIONS remain much the same, and business remains in much the same condition as last week.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....½ sieve	0	0 to 0		0	Mulberries.....½ lb.	0	0 to 0		0
Apricots..... doz.	0	0	0	0	Nectarines..... doz.	0	0	0	0
Cherries.....½ lb.	0	0	0	0	Oranges.....½ 100	8	0	12	0
Chestnuts..... bushel	10	0	20	0	Peaches..... doz.	0	0	0	0
Currants.....½ sieve	0	0	0	0	Pears, kitchen..... doz.	2	0	3	0
Black..... do.	0	0	0	0	dessert..... doz.	2	0	4	0
Figs..... doz.	0	0	0	0	Pine Apples..... lb.	2	0	4	0
Filberts..... lb.	1	0	1	6	Plums.....½ sieve	0	0	0	0
Cobs..... lb.	1	6	2	0	Quinces..... doz.	0	0	0	0
Gooseberries..... quart	0	0	0	0	Raspberries..... lb.	0	0	0	0
Grapes, bothouse.... lb.	6	0	11	0	Strawberries.....½ lb.	0	0	0	0
Lemons.....½ 100	8	0	12	0	Walnuts..... bushel	8	0	12	0
Melons ..... each	0	0	0	0	ditto.....½ 100	1	0	1	9

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... doz.	3	0 to	6	0	Leeks	0	3 to	0	0
Asparagus.....½ 100	6	0	10	0	Lettuce..... doz.	1	0	2	0
French....per bundle	0	0	0	0	Mushrooms.....pottle	0	2	3	0
Beans, Kidney....per 100	2	0	3	0	Mustard & Cress...punnet	0	2	0	0
Broad ..... bushel	0	0	0	0	Onions ..... bushel	3	0	6	0
Beet, Red..... doz	1	0	3	0	pickling..... quart	0	3	0	0
Broccoli..... bundle	0	2	1	6	Parsley per doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	3	0	4	0	Parsnips..... doz.	0	2	1	0
Cabbage..... doz.	1	6	2	6	Peas ..... quart	0	0	0	0
Carrots.....bunch	0	6	0	8	Potatoes..... bushel	2	6	5	0
Capsicums.....½ 100	0	0	0	0	Kidney ..... do.	3	0	6	0
Cauliflower..... doz.	4	0	8	0	Radishes.. doz. bunches	1	0	1	0
Celery..... bundle	1	6	2	0	Rhubarb..... bundle	1	0	1	6
Coleworts.. doz. bunches	4	0	6	0	Salsafy..... bundle	1	3	0	0
Cucumbers..... each	2	0	3	0	Scorzonera..... bundle	1	0	0	0
pickling..... doz.	0	0	0	0	Sea-kale..... basket	2	0	3	6
Endive..... doz.	2	0	3	0	Shallots..... lb.	0	3	0	6
Fennel..... bunch	0	3	0	0	Spinach..... bushel	0	0	4	
Garlic..... lb.	0	6	0	0	Tomatoes ..... doz.	0	0	0	
Herbs .....bunch	0	3	0	0	Turnips.....bunch	0	6	0	
Horseradish.....bundle	0	0	4	0	Vegetable Marrows.. doz.	0	0	0	

WEEKLY CALENDAR.

Day of Month	Day of Week	FEBRUARY 18—24, 1875.	Average Temperature near London.			Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.		Day of Year.
			Day.	Night.	Mean.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	s.	
18	Th	Royal Society and Linnæan.	45.2	31.1	38 2	10 af	7	18 af	5	0 af	2	22 af	5	12	14	10	49
19	F	Royal Institution at 8 P.M.	44 9	31 0	38.1	8	7	20	5	20	3	40	5	13	14	4	50
20	S		45.5	30.7	39 5	6	7	22	5	36	4	54	5	●	13	58	51
21	Sun	2 Sunday in Lent.	46 7	32.3	39 3	4	7	23	5	50	5	5	6	15	13	51	52
22	M	Royal Geographical Society at 8.30 P.M.	46 8	31.9	39 4	2	7	25	5	2	7	15	6	16	13	43	53
23	Tu	Medical and Chirurgical.	47.4	31.5	39.9	0	7	27	5	14	8	25	6	17	13	35	54
24	W	Society of Arts.	47.1	32.8	40.2	58	6	29	5	26	9	35	6	18	13	26	55

From observations taken near London during forty-three years, the average day temperature of the week is 46.6°; and its night temperature 31.6°.

STRAWBERRY FORCING.

AT the risk of repeating much I said on the subject last year, I wish to recommend, in preference to any other plan, that of layering the runners into the fruiting pots, which in my case are 7-inch ones. Those who have not so good a Strawberry soil at command as I have, had perhaps better be content with 6-inch pots, for the reason that it is of the greatest possible importance that the pots used should be filled with roots early in autumn, in order to have the crowns of the plants plump and ripe before winter. Bear in mind that the crown of the Strawberry plant already contains the embryo flower, which needs perfecting in autumn just as much as the plump buds on the Vine or Peach tree. If the materials for the flower are not there in autumn, the best possible treatment in the spring would fail to produce them. The flower should be so far advanced as to need only a continuation of warmth to expand it. With properly-prepared Strawberry plants there is no more difficulty in getting them to flower in December than there is in February. Black Prince if layered early will often commence flowering outside in October, and the fruit may be easily ripened in December, but it will be deficient in flavour unless the weather happens to be bright and mild while it is ripening.

I am never requested and I never attempt to produce Strawberries in winter, because I know it would only bring discredit on me, as it takes something more than appearance to satisfy those I have the honour of serving. In September and October we have a plentiful supply of Alpine Strawberries, which in my opinion are the most delicious Strawberries grown so long as there is sufficient sun to bring out their proper flavour, and December would be too soon for Black Prince to be tolerated, which at best is only second-rate in quality, while the delicate aroma of the mountain Strawberry still lingers on one's palate; but by the end of March good fruit of all sorts is becoming exceedingly scarce. There may be Grapes of the previous year's growth, but if so there has probably been already a satiety of them; or if the *£ s. d.* are not looked into too strictly, there may be new Grapes produced perhaps—taking account of fuel, labour, and ruined Vines—for the modest sum of 30*s.* a-pound, and even then they are not perfect in flavour; but Strawberries—good-flavoured fruits from three-quarters to an ounce weight—are honestly worth a shilling each in the beginning of April, and I believe they can be grown for less than that sum. Black Prince will not grow to the above weight, but Keens' Seedling will; and if Strawberries are not required before the 1st of April it is not necessary to force Black Prince at all. Keens' Seedling in April with me is often better flavoured than the same variety is out of doors in June. After April it does not do so well indoors as British Queen.

April of all the months is the month for forced Strawberries, and, let me add, forced Roses. I believe an amateur with plenty of spare time who mastered the subject—and it is not a difficult one—would have more to be proud of in a little house of Strawberries and Roses than he could possibly have from any other indoor gardening. The two can be grown perfectly well together. I always grow them together, although I have the command of half an acre of glass. The Strawberries require removing to a greenhouse after they have turned red, but before they assume a dark red, to perfect their ripening, and the Roses require removal to the same place to prolong their beauty. They both like bottom heat to start them, and an atmospheric temperature of 50° to 75°, with constant ventilation. The bottom heat in my house also supplies the atmospheric heat, excepting in very severe weather; this is a great advantage, for percolating as it does through the plunging material, which is always kept damp, it gives a moister and more genial atmosphere than could be obtained from bare pipes. Shelves I seldom use; I wish there were none. Stuck up as they generally are close to where the cold air is admitted, is the worst possible place in the house for tender plants; but strange to say such a position always seems to produce insects with good constitutions. My plants are from 3 to 7 feet from the glass, but of course there is nothing between them and it to obstruct the light.

I find, in addition to the fruit being larger and of better flavour from plants that have never received a check, it is also of a handsomer shape. I believe that is principally the result of perfect impregnation. I have an idea that a distinct individual impregnation is required for every perfect seed to be produced—and there are hundreds on some fruits—and therefore where it is not perfect the fruit does not swell. This accounts for the hard green patches seen on some fruits which are afterwards partially hid by other parts which have been impregnated, and consequently swell faster. Most Strawberries, I believe, if the flower has been perfectly impregnated, will have a regular surface, and generally round or conical, and the flesh will all be good alike. If I am right in this respect it shows that the Strawberry flower more than any other needs a healthy circulation of air when it is expanding. After the fruit once fairly commences to swell it will bear a very high temperature, and a close atmosphere will not hurt it till such time as colouring commences.

I will now state some of the advantages which layering into the fruiting pots in the first place has over the ordinary method of layering and afterwards potting. It is impossible during a hot summer to keep the small portion of soil contained in a 4-inch pot standing above ground in the sun in a suitable condition as regards moisture and temperature; there is always a risk of the pots getting dry in the middle of the day, and the temperature of them at that time is much higher than most people would dream of applying water, so that whether they get watered or not they receive a check, and even with the greatest care under the most skilful hands they will suffer at times. Some I know recommend plunging the pots as a remedy for this; it is partially so, but there is then a risk of going to the other extreme and over-

watering them, and also the roots may get out at the bottom of the pots. Moreover, I do not consider the root-growth so healthy as it would be above ground in a larger pot where it would be moderately aërated. Further, the labour saved at a time when labour is always scarce and valuable is immense, and the pots can all be got in readiness in a dry shed during bad weather; and lastly, the young plants when layered into the fruiting pots at first need not be severed so early, they can continue to draw supplies from the parent plants till the runners begin to wither, and there is no check from any cause whatever. Taking into account the check received when the runner is cut as soon as rooting has fairly commenced, the shading necessarily following this, the breakage and bruising of roots when transferring the plants from the small pots to larger ones, I am persuaded that runners layered into the fruiting pots are fully a fortnight in advance of those layered in small pots and afterwards shifted.

I suppose it is unnecessary to remind practical readers that the more checks the plants receive the more liable they are to insects. Red spider is often very troublesome to forced Strawberries; it not only injures the foliage by extracting its juices, but it is very partial to ripe fruit, and will frequently disfigure it altogether by robbing it of its refreshing brightness. My Strawberry plants last spring were entirely free from red spider, and this season, too, they are so far free. I attribute this to the summer treatment and the unchecked growth resulting from it. I believe it is generally in summer that the plants get their breeding stock of red spider, and then as soon as they are introduced to warmth in spring they are not slow to increase and multiply.

Strawberries for forcing should not be kept in houses till they are actually required to commence growth; failing a cold pit, they will do equally well plunged in a bank of ashes. The plants of course are quite hardy; it is only the pots that require protection. When in the forcing house, if the plants are placed on shelves, it is a good plan to place a piece of turf under each pot, which will greatly assist to keep them moist, and if cut into squares a little larger than the pots they can easily be moved about with them. The roots will enter the turf and obtain nourishment from it, and when ripening commences it will be found that the plants will bear to be kept drier than they otherwise would, and it is also well known that the drier they can be kept then without suffering the better flavoured will be the fruit. On no account must a plant be allowed to become very dry while the fruit is swelling; if this happens only once, it can never be fully remedied. If fine fruit is required, six to eight are quite sufficient to have on a plant. All the late flowers should be cut off with a sharp pair of scissors immediately a sufficient number of the forwardest are seen to be perfectly developed.—Wm. Taylor.

BLACK MUSCAT (MUSCAT HAMBURGH) GRAPE.

Opinions are conflicting as to the identity and merits of this Grape. Dr. Hogg in the "Fruit Manual" gives its name as the Black Muscat; Mr. Thompson in the "Gardener's Assistant," page 670, describes the Black Muscat of Alexandria and Muscat Hamburgh as distinct kinds. Muscat Hamburgh is thus described by Mr. Thompson—"Leaves large, deeply three-lobed, nearly smooth above, pubescent beneath; ribs set with short bristly hairs. Bunch long, tapering, and shouldered. Berries large, oval, black; flesh of the consistence of the Black Hamburgh, very rich, with a decidedly muscat flavour. This excellent variety is stated to have been raised from the Black Hamburgh crossed with the Muscat of Alexandria, in consequence of which the rich muscat flavour of the latter has been imparted to the Hamburgh breed, and a great desideratum obtained. It fruited for the first time in 1848, and produced fruit of great excellence in an old house, it was stated, without fire heat. It is one of the best new Grapes in existence—in fact we think the very best as far as we are aware." Mr. Thompson describes the Black Muscat of Alexandria as follows—"This in size, form, and quality is similar to the White Muscat of Alexandria, the only difference being in regard to colour. It is not generally cultivated, probably owing to its requiring much heat and yet not always colouring well; and when that is the case, although its flavour may be good, its appearance is inferior to that of the white variety, which is accordingly preferred." To make the description complete we must refer to Mr. Thompson's note on the Muscat of Alexandria ("Gardener's Assistant," page 672)—"Leaves large, deeply lobed, sharply serrated, smooth above, slightly pubescent beneath; petioles long, smooth, stained with red, as also are the ribs for some distance from them. Bunch very large, strongly shouldered. Berries large, oval, hanging loosely; skin rather thick; flesh firm, with an exceedingly rich muscat flavour."

Assuming Black Hamburgh to be Muscat Hamburgh, how are we to reconcile the divergence of the descriptions? Muscat Hamburgh has a Hamburgh flesh, ripens in a house without fire heat, Black Muscat has firm flesh and requires much heat. Not knowing the Black Muscat that was cultivated prior to the introduction of another kind under the title of Muscat Hamburgh I do not propose to express an opinion as to the identity of the two, but I submit that there is greater similarity between the Black Hamburgh and Muscat Hamburgh than between Muscat of Alexandria and Muscat Hamburgh, and these I shall note as best I can, taking that of the leaves first, then the bunch, and influence of temperature.

Firstly of the leaves. Muscat Hamburgh has leaves more like a Black Hamburgh than Muscat of Alexandria. All are five-lobed, the middle one tapering and elongated, and midrib straight. The midrib of the principal side lobes is straight in Muscat of Alexandria, but the midrib of the principal side lobes of Black and Muscat Hamburgh curve inwards, as also do the lobes to the middle or central one. The lower divisions of the leaves of Muscat Hamburgh meet or overlap at the footstalk, those of Black Hamburgh and Muscat of Alexandria not meeting or overlapping. The Muscat Hamburgh leaves are deeply cut as regards those between the middle and principal side lobes, as much so as those of Muscat of Alexandria, both being twice as deeply cut as those of Black Hamburgh. The divisions or cuts forming the two lower lobes are greater in Muscat of Alexandria by one-third than in either Black or Muscat Hamburgh, the length in both being about equal. The leaves also in Muscat Hamburgh are more deeply serrated than in either Black Hamburgh or Muscat of Alexandria. In texture the leaves of Muscat Hamburgh are more flabby and quicker dried up than either Muscat of Alexandria or Black Hamburgh.

The bunch of Muscat Hamburgh is more loose, and the berry-stalks are thin and flexile as compared with Muscat of Alexandria, which everybody knows are stiff and brittle.

Then as to influence of temperature upon the three kinds, I may state that I have these with others in a house forced to ripen in May, and also in another to ripen in August. In the first instance the Muscat Hamburgh starts as soon and as freely as the Black Hamburgh or Mill Hill Hamburgh, they being only a few days later than White Frontignan. Buckland Sweetwater starts same time as the Black Hamburgh. Muscat of Alexandria is a fortnight later in starting than White Frontignan, and fully a week later than Muscat Hamburgh. Muscat Hamburgh flowers simultaneously with the Hamburghs. Muscat of Alexandria is seven to ten days later in flowering; and whilst the Muscat of Alexandria has a tendency, when early forced, to dry up or shrivel in the bunch, the Muscat Hamburgh exhibits no such tendency. The berries set very freely, there being no small "deaf" flowers with spider-weblike-thread footstalks which characterise Muscat of Alexandria. This defect is not confined to this variety, and is not greater in it than in Lady Downes' and Mrs. Pince's. Muscat Hamburgh commences to colour at the same time as Black Hamburgh, and is ripe at the same time as it and Mill Hill Hamburgh, Muscat of Alexandria being a fortnight later. The flesh is firmer than Black Hamburgh, slightly crackling—about half as much so as Muscat of Alexandria, and the muscat flavour about as much developed as in Mrs. Pince's—in neither not more than a third that of Muscat of Alexandria. It hangs longer in good condition than Muscat of Alexandria ripened in an early house, and does not lose its muscat flavour by hanging.

Its doings in the later house are only a confirmation of its doings in the earlier one. Muscat Hamburgh starts with the Black Hamburgh, ripens at the same time, and keeps in good condition after the Black Hamburgh. Muscat of Alexandria are spotted, and rotten if the air be damp, and like Mrs. Pince's, and sometimes Lady Downes', are shrivelled if the air be dry; while Muscat Hamburgh has never yet spotted by a too moist atmosphere, but, instead of this, cracks at the point of the berry. It will hang well until February; how much longer I know not, as I have not tested, and the muscat flavour is as marked at that time as in September. There is one other point—viz., its colouring. It is the worst of any Grape I know in this respect. Heavy crop and large bunches in this, as in Hamburghs, result in bad colour.

No authority since Speechley seems to have known Black Muscat. Thompson ("Gardener's Assistant") describes it in 1859. Mackintosh ("Practical Gardener") does not name it in 1853. Masters in his catalogue ("Hortus Duroverni") has "Black Muscat of Alexandria, syn. Red Muscat of Alexandria. Colour, red-purple; shape of berry, long; bunch, long; flavour, rich musky; place, hothouse; time, late."

The wood of Muscat Hamburgh is very deep in colour, being very dark brown when well ripened, having no equal in this respect except by the Strawberry Grape, Mrs. Pince's, and Barbarossa.

The Vines of Muscat Hamburgh are upon their own roots, and planted in an inside border with liberty for the roots to pass outside. I have no idea of its setting better when grafted upon Black Hamburgh, neither of its colouring better or aiding its constitution, which is a good one. Artificial impregnation does not aid the setting of the berries except by distributing the pollen, when perfect flowers may be fertilised, which without the artificial impregnation might escape fecundation. Stoneless berries are simply such because they have no ovaries, or imperfect ones. The defect is in the flower, and may not be altered at the time of flowering; though well ripening of the wood, its exposure to abundance of light in formation, and development, and perfecting of the parts from which is to issue the fruit, will do so in the highest possible degree; and notwithstanding this, there are and will be flowers deriving no aid from impregnation natural or artificial.—G. Abbey.

NOTES FROM MY GARDEN IN 1874.

No. 3.—FRUIT.

It is not because our gardens are small and our cultures insignificant, that therefore we can have no interest in matters which are to be seen in other places in tenfold or fiftyfold greater quantities. Our few rows of Peas, our small Cucumber frames, our plot of Gooseberries, are of quite as much moment to us as when Peas are grown by the quarter-acre, and Cucumbers fill houses specially devoted to their culture, or fruits are produced by the hundredweight or ton. We have our little experiences, our successes, and our failures to describe, and we would fain hope that there are some other minnows who will like to desport themselves in our little streams, although the great tritons cannot find enough to cover them. We delight sometimes to see the bewildered looks of my lord's gardener when he condescends to come into our "diggings." His amazement at our presumption in asking *him* to see such a miserable little place, mingled with a desire not to appear rude, compels us to help him out of his trouble by deprecating his wrath, and assuring him we have really nothing to show him, and only wanted a little advice. I make no apology to readers of our Journal, for I know there are many possessors of small gardens amongst them, and they, it may be, will take an interest in these jottings.

In our neighbourhood fruit was tolerably abundant, and in my own garden I do not think I have had during my six years of tenancy a better crop altogether than in 1874.

Strawberries.—As a general rule this was not a very abundant crop last summer, the dry weather interfering with the swelling of the berries; but mine gave a very fair supply. The sorts which I grew were Dr. Hogg, Sir Joseph Paxton, Victoria, Marguerite, Viscomtease Hericart de Thury, La Constante, and Lucas. I commenced with some in my greenhouse, and had a few very fair dishes of Dr. Hogg from the shelf which, as I have described, is above the pathway of the house; and then I had a couple of rows under Looker's Acme frames, which came in a little before those from the open ground, so that by this means the season was considerably prolonged. For general purposes I find nothing better than Dr. Hogg, for you have size combined with flavour and productiveness. Victoria (Trollope's) is a most useful Strawberry, but lacks flavour; still its great productiveness, its suitability to all soils, and the length of time the plants last, all tend to make it a desirable fruit. Lucas is a very good hardy fruit and productive. The Viscomtesse did not do very well. Sir Joseph Paxton is a most excellent sort, very hardy, a strong grower and productive; the flavour not equal to the British Queen section, but still good. La Constante is one of the most delicious and aromatic of Strawberries, but I have not found it hardy. As to cultivation, I adopt the usual plan of letting the beds remain for three years; but I saw at my friend Mr. Peach's, Appleton-le-Street, most prolific beds which had been undisturbed for a much longer time—I think six years. I rather quake for my prospects this year, for I never knew so bad a season for making Strawberry beds. The continued drought made the beds so dry, that although I watered freely, and although I had the plants all ready rooted close at hand, yet I had to renew them again and again, and even now they look very irregular, or, as they say here, "very spotty."

Raspberries.—Of these I had an immense crop; in fact I do not think I ever saw canes fuller of fruit. They are planted in rows, and tied to a stout piece of galvanised wire stretched along the row. They are never dug, but only slightly forked over. Last year I gave them a good dose from the deposit in the cesspool in the garden into which the sewage of the house flows; and to this and the cool bottom in which they grow I attribute a great deal of the immense crop. The kind I do not know, but it is undoubtedly a good one.

Pears.—I had a great calamity in my miniature fruit garden, for I moved all in the autumn of 1873, and owing to the light character of the soil and the excessive drought I lost many: all the Cherries died, and the Pears and Apples look very puny. I ought to have watered, but really one cannot water everything, and so these perished. With regard to sorts, I very seldom see recommended an October Pear of great merit—Comte de Lamy, and if I may judge from my own experience a most constant bearer. I have one small tree of it which has never failed, and this year I gathered nearly three bushels from it, and had to prop up the branches, or otherwise they would have been broken by the weight of the fruit. In last week's Journal I see Knight's Monarch recommended, and I know it is a good Pear, but strange to say I never can get any ripe fruit of it. It bore well this year. I did not gather the fruit too soon, as they dropped off in my hand when gathering, and yet they would not ripen. They were laid out singly in an attic, but one and all either shrivelled-up or else rotted. It has been the same every year. Can any of your correspondents explain this or tell me where I am wrong? Two other large trees in my garden, Bon Chrétien and Beurré de Capiaumont, bore three or four bushels each; so that, although my small tree failed me, the larger ones gave me a good supply.

Figs.—I think that the most extraordinary crop I have had this year was from two standard Fig trees in front of my drawing-room window. Some of my northern friends will envy me no doubt; say, "Lucky fellow to live where Figs will ripen as standards!" These two trees are each about 12 feet in length, about 8 through, and 10 high. They are the old Brown Turkey, and from them I gathered last year more than one hundred dozen of fine large fruit; those that I sold fetched more than £4, and besides I had a large quantity for our own use, and also to give to my friends. It strikes me that this is a rather unusual crop, and so perhaps worthy of notice.

Other fruits hardly call for any notice. I have added this year British Queen, Amateur, Frogmore Late Pine to my Strawberries; but, as I have already said, my prospects of this fruit are rather indifferent. I have also Lee's Black Currant, and on my wall have placed the following:—Apricot: Moorpark. Peaches: Barrington, Royal George, Alexandra Noblesse, and Walburton Admirable. Nectarines: Elruge and Violette Hâtive. Pears: Easter Beurré, Beurré d'Aremberg. Plums: Coe's Golden Drop, Green Gage, and Jefferson's. But of course I cannot expect any from them this year; and as in all our neighbourhood disease has attacked the Peach, I very much fear I shall have to substitute other fruits for them.—D., *Deal.*

PACKING FLOWERS.

I have seen flowers packed in many different ways and in all kinds of boxes, and have heard many complaints that they are of little good when taken out of the box—that is, when they are packed in the ordinary way. I have been told it is useless laying flowers loose in the box, especially when they have a long way to go. In my case they are in the box about twenty-four hours.

I have packed them in both tin and wooden boxes with the same result. The boxes I now use are made of wood, 15 inches by 12, and 5 inches deep, with a false bottom, which has holes bored through, 1 inch asunder each way, with a good-sized gimlet. In the bottom of the box I place about an inch of clay mixed into a rather stiff mortar. This is rammed evenly over the bottom of the box, and then the false bottom is placed over it with just a tack on each side to keep it in its place. The stems of the flowers are now introduced through the holes into the clay, which will hold them quite firmly and upright.

Flowers packed in this way will be as fresh when taken out

of the box as when first cut from the plants, and the box may be thrown over and over by the railway officials and not a flower will leave its place.

Another plan I find very successful is to tack pieces of list or broad tape about halfway down the inside of the box, some one way and some the other, so as to form small squares large enough to admit a Rose or Camellia to the under side. The flowers, such as Roses or Camellias, may be pinned on the list separately. Smaller kinds may be tied in little bunches and pinned on the under side of the list, and when that is filled another lot can be pinned on the top side in the same way. A little damp moss tied round the stem of each flower or bunch will keep the flowers fresh. To a certain extent this mode of packing flowers is preferable to the former, as in that case the clay makes the box much heavier.—Thomas Sneasby, *Hare Hill Gardens.*

ROYAL HORTICULTURAL SOCIETY.

February 17th.

Fruit Committee.—Henry Webb, Esq., in the chair. A communication was read from Mr. J. Batters, The Gardens, Chilworth Manor, Romsey, describing the culture by which the new Potatoes exhibited at the last meeting were produced, and the Committee unanimously awarded him a cultural commendation for the exhibition, and a vote of thanks for the communication. Mr. McRonald of Chichester sent specimens of a large Pear, which was said to be for dessert use, and was called Gloria Mundi. This was exhibited in November last, but the Committee are of opinion that it is identical with Catillac. Mr. George Wheeler of Warminster sent a dish of Apples called Wheeler's Favourite; a very excellent dessert Apple, but they were very much shrivelled and not in good condition, so that the Committee considered it not better than some others in use at this season. Messrs. W. & J. Brown of Stamford sent a seedling Apple Beauty of Barnock, a medium-sized yellow Apple with broken streaks of crimson; a nice fresh and well-flavoured Apple, but not of sufficient merit to obtain a certificate. Mr. Bennett, The Gardens, Hatfield House, sent fruit of Lowndes Pippin, a large handsome round Apple, the flavour of which was gone.

Rev. George Kemp, The Vine, Sevenoaks, exhibited a dish of Beurré de Jonghe Pear, the flavour of which was delicious. It was awarded a first-class certificate. He also exhibited fruit of Délices Everard de Tournay, a richly-flavoured Pear, with the salmon-tinted flesh of Joséphine de Malines. Mr. Speed of Chatsworth sent fruit of the Cape Gooseberry, Physalis edulis. Mr. Taylor, Longleat Gardens, sent a dish of Orangefield Tomatoes, which were much admired for their brilliant colour, and a letter of thanks was awarded to Mr. Taylor.

Mr. Parsons of Danesbury sent roots of Magnum Bonum Onion, which were very fine and firm. The seed was sown in July, 1873. He also sent roots of the same variety from seed sown in March, 1874, and the firm-keeping character of the former was very remarkable. A vote of thanks was awarded to Mr. Parsons. Mr. Taylor of Longleat sent a dish of Dickson's Favourite Cucumber, which proved its merits as a valuable winter variety.

Floral Committee.—A limited number of plants only were brought before the Committee. There was almost a total absence of stove plants, owing, possibly, to the northerly wind having a deterring influence in keeping such tender subjects in their safer quarters at home.

The only first-class certificate awarded was attached to half a dozen plants of Abutilon Darwinii exhibited by Messrs. Veitch. This is a species of very dwarf habit, and extremely floriferous. The foliage is a vivid green, and the young growth slightly pubescent. The colour of the blooms may be described as orange brown, in which, however, the orange decidedly predominates, and contrasts well with the foliage. Some of the plants were blooming at 4 inches from the soil, continuing at each leaf-axil upwards. The species was introduced from Berlin, and gives promise of decorative usefulness, and more especially as it is amenable to greenhouse culture.

Messrs. Veitch also sent two small plants of Odontoglossum Warscewiczii, the growth of which somewhat resembles O. vexillarium, while the flowers are not unlike O. phalænopsis, but with several blooms on each spike. A second-class certificate was awarded. The same firm also sent a very fine group of Cyclamens. The plants (about fifty) were remarkably well bloomed, and were of firm and decided colours. A vote of thanks was deservedly given to the collection. Messrs. Hooper, Covent Garden, sent twelve good plants of Cyclamen. The foliage of some of these was distinctly marbled, and the blooms were nearly all spotted. The individual flowers were very large, and merited the vote of thanks accorded them.

Mr. H. B. Smith, Ealing Dean Nursery, contributed a collection of Cyclamens and Primulas. The blooms of the former were of good form and substance, but were limited to the lighter shades of colours. The Primulas consisted principally of semi-double varieties raised from seed, and were effective, yet with more scarlet in the colour their value would be enhanced. Some of the blooms of these were almost fully double. The collection also comprised a few good single white-flowered plants. A vote of thanks was given to the group.

Messrs. W. G. Caldwell & Sons, Knutsford, sent a nice plant of Azalea amœna Caldwellii, the result of a cross between A. amœna and A. Magnificent. It may be described as an amœna with large blooms, and is an effective early-blooming variety. A vote of thanks was awarded. Mr. Perry, gardener to J. W. Miles, Esq., sent a basket of Primula altaica. This is a very desirable and distinct variety for the hardy spring garden. The purity and cleanliness of the plants sent, however, suggested their having had protection, or had been grown under extraordinarily fine weather. A vote of thanks was given. Mr. Taylor, Longleat, sent an example of Browallia alata grandiflora, which is evidently a larger and more continuous-flowering variety than the normal form of this plant. Mr. Bennett, Hatfield, had a small plant of Thunbergia Harrisii splendens, a very showy variety, recommended for continuous winter blooming. A plant of Aucuba viridifolia, with bright green leaves and scarlet berries, was sent from the gardens of J. Drewry, Esq., Burton-on-Trent. Cut blooms were again exhibited by Mr. Parker, Tooting, of the hardy aquatic Aponogeton distachyon, which were very attractive and delicately perfumed.

OUR LETTUCES.

Paris Cos is the best of Lettuces. I have also found Holme Park Cos a valuable variety. I had it both transplanted and untransplanted, and, dry as the summer was, many of them weighed from 2 to 3 lbs. each. From a sowing made in September I have now in use good Lettuces of this variety, which have stood through the late winter without any other protection than the snow afforded them. Commodore Nutt was a failure with me. All the Year Round proved a very serviceable kind. I consider the lists of varieties, or rather of names, are too long for practical purposes. In the trials of Lettuces in the Royal Horticultural Society's Gardens was one called Magnum Bonum. Twenty-five years ago I had seed given me of a variety named Alphengs Cos. I grew this by the side of Magnum Bonum, but could discover no difference between the two; I concluded, therefore, that they were synonymous, and in this I am supported by the official report of the Chiswick trials, which reported Alphenge Cos and Magnum Bonum to be one and the same variety. This is a very useful summer Lettuce. After extensive trials I recommend Paris Cos, All the Year Round, and Drumhead for summer use; for winter, Black-seeded Bath Cos, and Hardy Green or Hammersmith.—Z. Z.

HELLEBORUS NIGER, OR CHRISTMAS ROSE.

This fine hardy midwinter flower grown in the open air and covered with hand-lights furnishes an abundance of cut blooms, which at this dull season of the year are especially appreciated. Those who have vases to fill, and who lack the convenience of heated structures in which to provide tender flowers, should grow this plant largely, and for two months they will never be short of bold white flowers to intermix with sprigs of evergreens and make a sitting-room cheerful. Of course these flowers are freely produced without any sheltering aid, yet a little glass covering ensures their cleanliness and conduces to their purity. This fine old herbaceous perennial is as hardy as the Buttercup, to which it is allied as belonging to the same natural order, Ranunculaceæ. Like most of this family the Christmas Rose luxuriates in rich soil and a partially shaded place, although it will flourish in the full sun providing the soil is strong and deep. Its adaptability to a shaded place is, however, an advantage, as being a position in which but few fine-flowering hardy plants will succeed. It is freely increased by root-division, but established plants should not be needlessly disturbed. A small plantation on which a frame can be placed will be found useful in most gardens. An annual surface dressing of rich manure will keep the plants in good blooming condition for many years. Can anyone communicate their experience in successfully raising this plant from seed? The information would be a boon to many besides—A Gardener without a Greenhouse.

The Late Mr. W. P. Ayres.—The widow and daughter of this well-known horticulturist having been left wholly unprovided for, some of his friends have determined to raise a subscription for their benefit. I am confident that many who remember the services rendered to horticulture by Mr. Ayres,

both personally and by his pen, will be ready to lend their assistance towards the accomplishment of so charitable an object, and will be only too pleased at having an opportunity of doing so.—JOHN WILLS, *Onslow Crescent, Onslow Square, Brompton.*

A CLASSIC TREE.

WHEN Dr. Johnson made his celebrated tour through Scotland, he saw only two trees from which a prudent hangman would venture to suspend a full-grown victim without fear of breakages, but unfortunately that method of sylvan decoration was largely practised in this country long before his day. Be that as it may, however, one of the two so highly honoured by his notice has just been totally destroyed by a recent gale. This was the remains of an old giant Ash which stood near the village of Ellon in Aberdeenshire, and which for the last fourteen years has only been an all-but-naked trunk.

A Banffshire newspaper in recording its destruction, says in connection with the cause of its more than local celebrity, that "it is well known that the Doctor got the blinds of his carriage pulled down so as not to see the avenue of fine trees while going up to Cullen House."

The following particulars have been kindly sent me by a correspondent at Ellon:—"All that latterly remained of the old tree referred to was a trunk of about 13 feet in height, and measuring 10 feet in circumference at 4 feet from the ground. It was supposed to be upwards of 250 years old. It was sold along with a number of other old trees on the Ellon property to a timber merchant about the year 1835, but the late Rev. Dr. Robertson, who was then parish minister here, having a liking for the old tree, rebought it and allowed it to stand. It was then comparatively healthy and far exceeded in size any in this neighbourhood. Some years afterwards it lost one or two large branches, partly from gales and partly from natural decay which began to set in about the upper part of the trunk. In order to prolong its existence if possible, the then proprietor had all the decaying parts removed, stopping-up the hollows with cement and covering with lead, also hooping the main limbs with strong iron and connecting them together by long links and screws. For a number of years after this was done it seemed to prosper, until the memorable hurricane of October 3rd, 1860, which completely disbranched it, leaving only the trunk above mentioned.

"In connection with its partial destruction at that time a curious incident occurred. Dr. Robertson, who had left Ellon some time before and gone to reside in Edinburgh, was that very morning a passenger by the stage coach on his way to revisit his old home. Just as the coach was nearing the tree, and no doubt while the Doctor's eye was resting on it with a kindly interest, the old tree waved its manacled arms for the last time, and fell crashing into the highway almost literally at the feet of its former protector."—R. D. TAYLOR.

FAILURES IN CUCUMBERS.

IN answer to "A MARKET GARDENER" (page 94), I have been troubled with a similar grub in the roots of Cucumber plants six years ago. In the garden I then had charge of I had a large house for growing Cucumbers, and I began to cut fruit the first week in March. The plants grew well to the end of June, when some of them began to die at the tips of the branches, injuring also the young fruit, and in two or three days the plants so affected died. In searching for the cause of this fatality I very carefully cleared all the soil from around the stem to examine the roots, when I found several white swellings on the bottom part of the stem, and also on the roots, about the size of large peas, which on being cut through the centre revealed a small white grub about an eighth of an inch, and some a quarter of an inch long. If I destroyed the grub, and then dusted the stem and roots over with fresh slaked lime, added a little light turfy loam previously warmed, and shaded the house for a few days many of the plants recovered and gave fruit to the end of October. I advise "A MARKET GARDENER" to follow the plan I found so successful. I trust some of the readers of the Journal will give their experience of any Cucumber disease, and the remedies which may have been successfully applied.—G. S., *Hadlow, Kent.*

ROYAL HORTICULTURAL SOCIETY OF IRELAND.—The following are the Society's Exhibitions during the present year:—Spring Exhibition, Thursday, April 22nd; May ditto, Thursday, May 20th; summer ditto, Thursday, June 24th; autumn ditto, Thursday, August 26th; winter ditto, Thursday, November 25th.

BROCCOLIS.

"I HAVE not entered on the subject of Broccolis, &c., for in truth I know not what to say." That is a remark of "D., *Deal's*," on page 92. Fancy our gifted and versatile friend driven to such a strait as to "not know what to say!" The case must indeed be a bad one when the veteran thus throws up his brief so summarily. He plants so as to gain a succession, but they all "come in of a heap." "So they do," will be the mental remark of hundreds of readers. Yet why should they when we see what the catalogues say? By these authorities we may cut Broccoli for ten months in the year. What! ten months out of twelve, and yet they "come in all of a heap!" Well, it is true—both assertions are true, as I have proved. Last year I cut Walcheren, September and November; Snow's Winter White, December and January; Adams's Early White, February and March; Wilcove, April and May; Carter's Summer, June. By just one variety of each section a continuous supply was kept up until the 17th of June; I observed that particularly, while at the same time duplicate varieties were also in use, thus making the period of cutting doubly sure. In the September and November period were Veitch's fine autumn Cauliflower and Early White Cape Broccoli; December and January, Backhouse's White; February and March, Hampton Court; April and May, Dilcock's Bride; June, Cattell's Eclipse. Thus by five varieties the above period was covered, having in reserve half a dozen varieties more. But the fact remains, that had the quantity of the five first mentioned been doubled every purpose would have been answered just as satisfactorily as it was done by the whole list of kinds.

Now there is this to be said in the matter of Broccolis, that they possess no clearly-defined standard of nomenclature. Should this important desideratum ever be attained it would be to the general advantage. Seedsmen would gladly abridge their lists if the public knew what they were ordering. But they don't know—that is, if they, as many do, change their seedsmen every year. If you order a given kind from one house this year, and from another house the next, the probability is that you will get two different sorts, except in the case of a new variety, which is everywhere alike for about a year if the demand is not too great. I have had a good deal to do with Broccolis, and have experienced considerable inconvenience by blanks and failures. I have had Snow's Winter rushing-in in April a few days after Cattell's Eclipse, which should have waited until June. I was then in "D., *Deal's*" dilemma. It was "all of a heap" with a vengeance. The only way I got over it was to order small quantities of several varieties from an established house and take note of their conduct. In that way a train of sorts was found following each other with satisfactory regularity. By sticking to these and the source of supply I have had for some years no further difficulty. I cannot give any better advice to others than to do likewise. Find what suits best, and order the same from the same place again. Don't be hypercritical as to the varieties being correctly named. Names are nothing in your case then; it is simply a case of time and Broccolis, and fitting the one to the other. To sum-up this part of the question: Go to a house with a reputation to lose, and if you are served well stick to the place and the varieties until you have proved for yourself that a new introduction will serve you better. That is the advice I give to my personal friends on this matter, and it occurs to me, if it is of any use privately (as it has been), it may be publicly.

Perhaps I may add a word as to sowing. With the sorts above named two sowings have always sufficed—viz., all the kinds by April 1st, except the latest kinds, and these—that is, Carter's Summer and Cattell's Eclipse, towards the end of the first week in June. These late-sown plants attain no great size in the summer, and in the autumn, if the weather has been dry, do not appear to have build enough about them ever to produce heads at all. Do not, however, dig them up, but dung them—that is, give the ground between the rows a good covering of manure, packing it up to where the hearts should be. This will protect them from frost, and the enriching material will go directly to the formation of heads. The plants so treated will in spring grow marvellously, and will yield more eatable produce and less waste in large leaves than

by any other mode of culture known. I have no opinion of digging-in a superabundance of manure for Broccolis, having a notion that a succulent, and consequently a tender growth, is thereby fostered. I prefer growing them on firm solid ground in summer for spring use, giving each plant plenty of room. If the plants do not get rank and robust they will have some woody fibre in their stems, which will stand them in good stead when winter comes, and the heavy surface-dressing of manure will bring out the heads. As a rule there is a fearful waste in growing Broccolis for a gentleman's table by applying manure to the ground at the wrong time. By planting in rich ground large plants are produced when smaller ones would be better. If they survive the winter the heads are twice too large for table purposes, while the gross foliage goes to the rot-heap. A dwarfer, sturdier, steadier, and harder growth in summer is a point worth aiming at, and then give the manure on the surface at the approach of winter. This will protect the stems and give a lift to the plants at the right time, when they will push up their heads small, free, clean, and sweet. When a garden boy I well remember the remark of the cook on receiving such nice small stuff; it was, "Them's the sort, lad!" but the bigger the Broccoli the bigger the scowl. It was so when I was a boy, it is so yet.—Old Friend.

PEARS.

Some very important additions have of late been made to our dessert Pears, such as Bezi Msi, Commissaire Delmotte, Madame Millet, &c., all of which are said to come into use from February to May.

When we read the advice given at page 121 by your gifted and careful correspondent Mr. J. Rust, some may be inclined to say, "This is a retrograde step. Why plant such old varieties as Knight's Monarch when we have such superior new sorts which will ripen late and supply us with dessert Pears nearly until summer Pears come into use again?"

There is something to be said for and against this. It is a very important matter to know which varieties suit certain soils and localities. This requires many years of patient culture. Those new varieties which have of late been introduced to our notice are generally described "as really good, melting, buttery, aromatic, sugary, &c." (very tempting to young gardeners and amateurs), and may after years of patient cultivation turn out very good stewing Pears, but may also come far short of the high character with which they were brought before the public.

Mr. Rust would have done well if he had added a few more well-known useful hardy sorts of late dessert Pears, good bearers, such as Ne Plus Meuris, often taken for Knight's Monarch, being nearly alike in size, shape, and period of use; Easter Beurré, Bergamotte d'Esperen, Passe Colmar, Crasanne, &c.

No doubt Dumelow's Seedling Apple is the same as Wellington, and requires much sugar. Another good late kitchen Apple is Norfolk Beefing; also the Russet varieties are good for late dessert as well as kitchen use.—D. Cunningham, *Moor Park*.

THE ROYAL ASHLEAF POTATO.

Mr. Rivers wishes me to correct an error as regards this valuable Potato. It was brought out by him, but was raised by his friend, Mr. James Ashwen of Evesham, in 1858. He adds, the Royal Horticultural Society makes it a synonym of Myatt's. The Royal Ashleaf is not Myatt's, but is like it. The same may be said of the Lapstone and its race, Hero, Taylor's Hybrid, and Pebble White. Taylor's Hybrid has blue flowers, and the other three Potatoes have white flowers.

Years ago Mr. Rivers wished the mistake about the Royal Ashleaf to be corrected. I ought to have complied at once. The following, as well as I can remember, is what he told me. He said, "I was staying with my friend Ashwen at Evesham, and he gave me and Mr. John Spencer, then head gardener at Bowood (now steward) three seedlings, A, B, and C, to try. We both fixed on the one now called the Royal Ashleaf. As I brought it out the salesmen for their purposes attributed its origin to me. This I corrected at the time; but it has ever since gone by the name of 'Rivers's Royal Ashleaf.'"—W. F. Radclyffe, *Okeford Fitzpaine*.

Gardeners' Royal Benevolent Institution. — Robert Broadwater, Esq., Master of the Worshipful Company of Fruiterers, will preside at the thirty-second anniversary festival of this Insititution, to be held at the London Tavern on the 2nd of July next.

NARCISSUS POETICUS.

The Narcissus is one of the oldest, hardiest, sweetest, and most beautiful of bulbous-rooted garden plants. Poets have sung its praises, and artists have endeavoured to delineate its graceful forms; authors have written on its beauties, and it has received honour and attention from florists and plant-lovers in almost all lands. That was in the somewhat remote past, when intrinsic and individual beauty was more fully appreciated than was the case in the massing period which succeeded. But fashion, with all its exacting sternness, could never annihilate the plants which our forefathers admired, and which are now rising again from the neglect to which for a few years they have been relegated.

Fig. 38.—Narcissus poeticus.

The genus Narcissus belongs to the natural order Amaryllidaceæ, and is divided into a variety of distinct types or subgenera, but which, however, while being popularly admitted, are by no means authoritatively defined. The thorough distinctness of these groups, however, is unquestionable, and they serve special purposes of decoration, and cover a lonely period by their season of flowering in the spring time of the year. The particular form above figured is a fair typical representation of the genus, and is in itself a most useful and attractive species. The normal form of poeticus is single, pure white, with red corona. It grows to a height of about 1 foot, and flowers in May. It is a beautiful border plant, and has a fine, free, wavy effect used in lines in the shrubbery. The sub-varieties vary but little from the original in colour, but some have larger flowers, as N. poeticus majalis, while others, as grandiflorus, are earlier in coming into bloom.

There is also the double variety, pure white and exceedingly fragrant. This is fine; indeed, all are especially suitable to furnish cut flowers for room-decoration.

We would now glance at some of the allies of the type just noticed, and we appreciate at a glance the great diversity of character, colour, and form which exists in the numerous varieties of the family. There are the lowly Corbularias, some of the sweetest of Flora's gems, which are so neglected as not to have a place in nine-tenths of English gardens, instead of having, as they ought to have, a welcome and a home in all. One of the smallest of these, and one of the best, is C. tenuifolia (Hoop Petticoat), golden yellow, growing only a few inches high. C. conspicua is equally worth growing, and is more plentiful. The white variety, C. alba, is exceedingly chaste, and, unfortunately, somewhat rare.

From these miniatures we pass to notice very briefly another group almost perfectly opposite in character—viz., the Pseudo-Narcissus, or Daffodils. There is less refined elegance in this group, and they are better described as gaudy; yet this term is only legitimately permissible when they are used in unsuitable places, and the term is then more applicable to the taste which misapplies the plant than to the plant itself. Close beneath the drawing-room windows in loose careless patches they may be regarded as coarse; but see them in bold massive groups or broad thick lines skirting the wood of some distant view, and what can be compared to their dazzling brightness at the period of their blooming? As thus seen with the sunlight glistening on their massive heads the effect is positively exhilirating. Used in quantity for distant effect they are especially adapted, and never look better than when growing out of the green turf of lawn or pasture. When once established in fairly good soil they will push through the grass at the call of each succeeding spring, and will last for years with little or no attention.

Very nearly allied to this section is another with conspicuous, yet withal very beautiful flowers, alike in form to the above, but softer in colour, of which N. incomparabilis is a typical example. The whole of this section are particularly beautiful. Their prevailing hues are primrose and the softer shades of yellow with white. The flowers of these have considerable intrinsic merit, possessing in no small degree the form and substance of the Rose; they are, moreover, sweet, and for cutting for vases few things are more suitable and effective. The double white variety has long enjoyed the designation of the Peerless Daffodil, and certainly few can question its simple beauty.

But even more beautiful than this is the waxy-petalled pure white variety, N. cernuus plenus. As a flower for a lady's hair and other room-decorative purposes the stove Eucharis amazonica or the greenhouse white Camellia can hardly surpass this charming hardy flower. To see it growing in the border with its partially drooping head it might be passed by unnoticed, but cut it and intermix with it fronds of Ferns and it will compel a pause for admiration from every passer-by. It is almost as sweet, quite as pure, equally good in texture, and superior in form to the finest blooms of Gardenias. This variety is unfortunately somewhat scarce, its increase having been neglected, but it is worthy a place in every garden where cut blooms are in request. It is commended to all lovers of white cut flowers as giving a supply when white Camellias fail and before Roses are in profusion.

We now pass on in this cursory review, to which N. poeticus has led the way, to the well-known N. Tazetta or Polyanthus group. These are commonly cultivated in pots, but are fine for the outside garden, and are better adapted for growing under the partial shade of trees than most plants. It is not necessary to enumerate, but we may say that the chaste old Paper White variety is worthy of more extended cultivation than it generally receives.

With the necessary omission of many varieties of Narcissus we would not pass in silence the bright and sprightly Jonquils. A quarter of a century ago most gardens had glittering masses of these—both the double and single, but they are not commonly seen now; yet grown in quantity nothing else can give in April such decided brightness to a garden.

It remains only to say, in closing these gossiping notes, that the whole of this tribe of plants are bulbous-rooted, and can be purchased and planted any time during their season of rest. Do not forget them. Do not limit bulb orders to Hyacinths and Tulips. Think of the Narcissus in its various forms. The genus literally teems with quiet, chaste, satisfying beauty. They will grow in any kind of soil, but of course the richer and deeper it is the better will the plants flourish. Further—and this may not be so well known—they will remove from place to place at this season of the year, preserving earth to the roots, and not suffering them to become dry during removal. The varieties too, which are suitable for indoor decorative purposes, may be taken out of the ground and potted just when the plants are breaking through the ground. The flowers are then formed, and only require free soil, a suitable—that is, a moderate temperature, with a sufficiency of water to bring them to perfection.—W.

BUDDING.

In the number of January 21st Mr. Benstead describes his method of separating the wood from the shield, of which I do not quite approve, although it may suit some sorts, such as Lord Raglan, because, separate the wood from the shield how you will, it is very rarely that the eye will come out. I will attempt to describe my method, but I do not use the quill, not deeming it necessary at all. Insert the knife above the eye and bring it out obliquely, then put the nail of the left-hand thumb on the wood opposite the eye. Next put the point of the knife under the wood, snatch the wood and shield asunder, breaking the wood at the thumb nail; then sever the other end of the bud, and snatch the wood out in the same way.

I have found all kinds of Rose buds so taken out to be quite perfect. Perhaps some may think the way I have described tedious, but I do not find it the least so, as I can put in two buds in one minute, and with good success. I lately budded ten rows, numbering sixty in a row, and not one failed amongst them.—J. C. Colman, *Greenford Hall.*

A HARDY PITCHER-PLANT.

We have been asked by "A Lady Gardener" to name a Sarracenia sufficiently hardy to grow in the border of a midland county garden. Not knowing of one, we referred to the catalogues of various florists, and find the following in that of Mr. T. S. Ware, Hale Farm Nurseries, Tottenham. He has obliged us also by sending this wood-engraving from his "Illustrated Catalogue of New and Rare Hardy Perennials."

Fig. 39.—Sarracenia purpurea.

"Sarracenia purpurea.—This is the only hardy Pitcher-plant in cultivation. It is a native of the American swamps, where it forms a dwarf prostrate mass, producing large winged pitchers of a dark green colour, while the throat and lip are beautifully veined with crimson. The flowers are solitary, nodding, and of a deep purplish-red colour; a fine associate for Cypripedium spectabile, Parnassias, Pinguiculas, and others of this character."

NOVELTIES IN THE ROYAL GARDENS, KEW.

Of the large number of Acanthaceæ known in cultivation comparatively few only are worth universal attention. A few of the best well-known kinds will always hold their own; but in addition to these are several beautiful species that we rarely meet with. Stephanophysum Baikiei, now flowering in the Palm house, may be mentioned as one. During the winter season it produces fine panicles of tubular scarlet flowers, which have the advantage of being more persistent than is often the case in the order. The habit of the plant is dwarf, and though not much inclined to branch, is easily compelled to do so by cutting back. Its leaves are ovate lanceolate, in opposite pairs. This and several other Acanthaceæ appear to receive much benefit from being shifted shortly before the time of flowering. The production of bloom is much strengthened, and the quantity in no degree diminished. It was introduced to Kew by the Niger Expedition under the command of Dr. Baikie, after whom it was named, and was figured in the "Botanical Magazine" of 1859. Cuttings are rooted without difficulty in a few days, and now is a good time to get them in for flowering next winter. An intermediate-house temperature is

sufficient, and the soil used should be a rich mixture consisting in good part of loam.

Roudeletia (Rogiera) cordata, an uncommon plant, is also flowering in the same house. It has large trusses of pale pink flowers having a slight scent. The nearest relation is perhaps the well-known R. gratissima, from which it differs by the larger and stronger growth. It is a native of South America. The genus Rogiera is now merged into Roudeletia; and if so nearly related we would suggest the possibility of raising hybrids between R. speciosa and the subject of this paragraph which might surpass either of the parents, the one possessing colour, the other size of truss with good habit and fine foliage.

In the Succulent house we observe Echeveria fulgens and E. retusa finely in flower. They are beautiful species, and worth growing for decorative purposes. This recalls the use that may be made of the allies for conservatory decoration after having been taken from their summer sites of display out of doors. E. metallica, for instance, if carefully potted before the advent of frost, will throw up vigorous panicles of bloom that will have a fine effect during several of the winter months.

Cytisus filipes is very attractive in the Conservatory, and, though pretty well known, is not often cultivated. The weeping branches studded with pure white flowers have a very pleasing effect. It is said that by grafting on tall Laburnum stems the drooping habit may be shown to advantage. The flowers are sweetly scented.

On the Rockwork is a new species of Milla (Triteleia)—M. Leichtlini. The flowers are white, and the look of the entire plant reminds one of an Ornithogalum. It is not the most beautiful of the genus. Here also Cyclamen coum is showing its brilliant rose-coloured flowers.

SPARROWS—SNOW'S WINTER WHITE BROCCOLI.

I WRITE principally to make recantation of a statement in the *Journal of Horticulture*, vol. i., p. 461—viz., "That sparrows eat Peas and the buds of trees I admit." The statement relating to the buds I beg to withdraw, as it was made through fear of offending that sense of supposed right of those who may have had their schooling, as I had, from "old prejudices" in matters relating to sparrows. My father taught me to take sparrows at night with a riddle from haystacks, whither the birds had withdrawn at night for warmth or shelter. The farmers at that time offered a farthing for each young unfledged bird or egg, and a halfpenny for every old bird taken to the individual appointed to receive and pay for them. This was just the thing for boys always on the look-out for a little money. Sparrows I was taught were of no value whatever to man. Imbued with this idea I waged war against the birds by every contrivance and weapon known at the time, but after-years of careful observation have taught me how much I erred in that murderous work.

With the above recantation rests my ease of mind. I readily admit "AGE" and Mr. Allcock are entitled to their own views, which, however, do not alter mine. I first require absolute proof of the birds at the buds, and taken with the buds in their crops. May I refer "AGE" to an article on the house sparrow in the *Journal of Horticulture*, vol. iii., p. 681? after reading which may we not exclaim together, "Surely we are not all wrong!" There is no need to write-up the hedge sparrow; it does no harm, it has no enemies in man, while the house sparrow had at one time a price put upon it for destruction.

Just a word in reply to Mr. William Taylor. I had and have the true Snow's Winter White Broccoli as supplied guaranteed by Messrs. Veitch. My treatment differs from his there can be no doubt, but there is another difference which Mr. Taylor fails to see—that of climate. Three hundred miles further north and 500 feet above sea level means something. I have cut Snow's Winter White Broccoli early in December within seven miles of York and elsewhere; but what that has to do with the trueness of a variety or cultivation I am unable to apprehend.—G. ABBEY.

I HAVE been somewhat concerned to read the numerous complaints in the Journal respecting the ravages committed upon Gooseberry and Currant trees by the irrepressible sparrow, and have feared that the advice of some of your correspondents may be too generally acted upon, in which case the poor sparrow is likely to have a hard time of it during the coming spring. The particulars of the system pursued by me, and which has succeeded perfectly, may be useful to some of your numerous readers, and save the lives of some of my feathered friends. Sparrows literally swarm here; one cannot cross a stubble field without pulling up, not hundreds merely, but tens of thousands. Therefore if he be so destructive, as some allege, the mischief done must be very serious indeed.

Now, taking into consideration that this is one of the most highly cultivated and highly rented districts near the metropolis, and also taking into consideration the money-making nature of the West Surrey farmer, it does seem strange that such swarms of destructive (?) birds should be allowed to increase and multiply at the rate they are doing, unless those worthy people are quite blind to their own interests upon this point—a failing, however, which those who enjoy their acquaintance will hardly credit them with. I have just examined my Currant and Gooseberry bushes, but cannot discover a bud touched, and the reason is this:—During the late inclement weather our birds were fed every morning with bread crumbled very fine, so that considerable time should be occupied by Mr. Sparrow in filling his crop. But what I apprehend more effectually checked his disbudding propensity was a good dusting of soot applied to the trees occasionally, throwing the soot well at the trees so that it may stick among the buds. The Currant and Gooseberry buds are now swelling, and no time should be lost in giving them a good dusting; the buds are now very tempting, and if this is not done at once many will be destroyed.

The sparrow will not touch the filthy Gooseberry caterpillar nor will (so far as my experience goes) any other bird. But why rear Gooseberry caterpillar, the remedy for its destruction being so very simple? All I do is to remove the soil under the trees to the depth of about 4 inches, scattering it far and wide about the garden, birds and frosts will do the rest; then replace the soil removed with fresh earth, adding a small quantity of manure, thus removing an enemy and supplying a fertiliser at the same time. November is the best time for this operation.

To protect Peas from the sparrow with string or cotton, much depends upon the time and mode in which it is fixed. Many people do this at the sowing time, running it close to the ground. This is wrong the thread should be laid just as the Peas are breaking through the soil, and at a height of about 4 or 5 inches, one strand on each side of the line, these should be about 4 inches apart. If the stringing be done at the sowing time the birds get used to it by the time the Peas come up, whereas if done at the proper time the Peas get well into leaf and out of danger before the birds get accustomed to the threads. A few lines here and there across the garden at the height of about 7 feet would materially assist, the sparrows being very shy about going under anything which looks like a net. Crocuses and Primroses may be protected in a similar manner, and the more invisible the colour of the thread the more effectual would it be in scaring the birds. Do not let us take to shooting our small birds until other remedies have been tried, or it has been clearly proved that they are in excess of our requirements.

I may add that a few summers ago 150 birds at least were hatched and reared in my small premises of 10 yards by 30, those included three families of robins, by what appeared to be the same pair of birds, and in exactly the same spot—viz., the porch over our back door. These young birds were, as well as we could make out, entirely fed upon caterpillars, and from early morn to dewy eve the parent birds were unceasingly occupied in bringing food to their voracious offspring. The number of caterpillars thus destroyed by the parents of our 150 young friends must have been incalculable.

The sparrows last summer cleared my Roses of aphides, and no cockchafer has the smallest chance of escaping with his life, he is captured when on the wing.

My greatest enemies in a gardening sense are cats and dogs. If Sir Stafford Northcote would but tax the one and double the tax on the other, or instruct his myrmidons to see that every wretched cur contributed its crown to the revenue, many small gardeners in this neighbourhood would be exceedingly grateful, and carry on the cultivation of their little plots with renewed vigour, knowing that a sensible reduction of those (in too many cases), useless and annoying pets would soon follow. —WEST SURREY.

As the crusade advised against the sparrows may be acted upon with indiscrimination by many readers, and, conse-

quently, the lives of all the sparrows of the kingdom be placed in jeopardy, I will array myself on Mr. Abbey's side, and endeavour to state a few plain facts, which I trust will deter some enthusiasts of the *chasse à la mort* from entirely banishing sparrows from their places. The principal question is: Does the good they do compensate for the alleged mischief? I have watched the doings of these little birds in this and other countries, and I do not for a moment assert their innocence of the crime of eating Goosebury buds, but never to an alarming extent. A few bright-coloured shreds hung on the bushes will usually keep them at a respectful distance. The destruction of seeds they are charged with is not to be compared to that of chaffinches, which are most determined seed-eaters.

If anyone takes the trouble to notice the kind of food the sparrows feed their young with, they will see that it consists of larvæ, ants, caterpillars, beetles, worms, &c., and it is estimated that to satisfy those hungry little ones requires weekly at least three thousand of the above-named insects, because from my own observation each of the old ones carries food to the nest no less than twenty times per hour. This wholesale destruction of innumerable noxious insects is, to say the least, an equivalent for a few fruit buds. I would recommend, where sparrows really abound in alarming numbers, to destroy part of the young before they are fledged. By that method you ensure the destruction of a large number of insects, and at the same time keep the sparrows within bounds.

I will conclude with the following fact, which will speak for itself:—Frederick the Great, as is well known, was a great epicure of Cherries, but could not obtain them in sufficient quantities from his gardens at Potsdam on account of the depredations committed on them by sparrows. He determined on the utter extirpation of these birds. Sixpence was paid for every couple brought in, and in course of a few months not a sparrow was to be seen for many miles round.

What was the consequence of this war? The great king not only had no Cherries, but no other fruit, the trees were covered with caterpillars, fruitless and nearly leafless. Seeing that he could not violate a law of Nature with impunity, he rescinded the order, and was even compelled to import large numbers of those little Cherry fanciers at a great cost.

In reply to "Age," I would state that sparrows have been sent to New Zealand some years ago, where they have sufficiently multiplied to answer all necessary purposes.—A. Wipf, *Heighington Hall Gardens.*

I am no advocate for destroying life, but when it becomes a nuisance I believe we are authorised to use our judgment in taking away life.

Notwithstanding all the praise lavished on the sparrow by Mr. Abbey (and I look on him as an authority), my experience tends in an opposite direction. I had much rather my young Peas, Lettuces, and the like were left alone than picked to pieces by sparrows, to say nothing of them in connection with the bud question. I have seldom known early Peas and winter Lettuces attacked by caterpillars, but I have known them much injured by sparrows. This is not all their mischief, for when you are anxiously looking for gathering your Peas you often find them gathered for you, and on approaching the place you see the sparrows go, and your Peas with them. It is all very well to talk about a dusting of lime, a red thread, a net, and the like, but birds will be fed. It may be that persons like Mr. Abbey may have men and means at command, but there are hundreds that have not, and it is the latter class that suffer most from the depredations of the feathered tribe.

There ought to be a very large margin left between great and small means. I have had the good fortune to be placed in at least one place where Ivy was a prevailing feature, affording abundance of shelter for the sparrows, and from experience I know more of them than I care to tell. I know they will eat caterpillars and buds too, but they prefer Veitch's Perfection Peas in a young state.

I endorse Mr. Allcock's sentiment, and say Catch them and kill them. I had rather contend with the caterpillars than have both caterpillars and sparrows to fight against.—H.

VEGETABLE INSECT-EATERS.

The genera known as insectivorous are eight in number—Cephalotus, Darlingtonia, Dionæa, Drosera, Heliamphora, Nepenthes, Pinguicula, and Sarracenia. Of these, Darlingtonia, Dionæa, Drosera, and Sarracenia have been most carefully watched. So far as is known, Ellis, an American botanist and collector who lived near a hundred years ago, was the first to notice that the entrapping of insects by Dionæa was anything more than accidental. These observations and some others that were made about the same time were published in the Transactions of the Linnæan Society in 1815, but did not then attract much attention, being generally discredited by botanists.

The observations of Mrs. Mary Treat of Vineland, New Jersey, are the most recent, as well as among the most thorough that have been made on these curious plants. In the month of May last she received from Dr. Wood of Wilmington, N.C., some thirty fine specimens of the Dionæa muscipula, and placed them at once in separate pots, numbering each and keeping a careful diary from the outset.

When an insect is entrapped a slimy secretion begins to ooze from the inside of the leaf, and in a day or two envelopes the insect's body. After a period of several days the insect disappears, with the exception, perhaps, of some hard parts, which are ejected, and the leaf re-opens if it is healthy, to receive another victim. Such being the *modus operandi* in general terms, Mrs. Treat proceeded to make more careful observations. She found that the leaves and plants differed greatly in their powers of assimilation. Some leaves were unable to digest even a single fly, while others disposed of three successively, but never could manage a fourth. When a leaf has done its duty in contributing nutriment to the parent stem it dies, and is replaced by another or others. The leaves were not restricted to a uniform diet. Mrs. Treat tested them with beetles, spiders (of the daddy-longlegs variety), &c., and even sat for some two hours with her little finger in one of the leaves. This last experiment was unsatisfactory, as for some reason her nerves refused, much to her regret, to let her remain a prisoner long enough to be even partially digested. The leaf had, however, begun to exude its digestive fluid, as if it would have been quite pleased with a human victim had it been big enough. Beetles and other hard-winged insects were digested by some of the stronger leaves, the operation requiring in some cases as much as two weeks. The strongest plant in the collection caught in all forty insects between May and October, and digested most of them, but this was accomplished by successive sets or relays of leaves. Insects removed after two or three hours of confinement sometimes recovered, but if they were left long enough to become covered with the slimy secretion they always died, although in some cases the secretion was carefully washed off. Such in brief are some of Mrs. Treat's conclusions.

In the case of Drosera, natives of the Northern States of America, she found that while the leaves would close over bits of beef and the like, they would take no notice of dry mineral substances, and seemed doubtful about fruit. If, however, a fly were fastened within, say, half an inch of a leaf, it would begin to reach toward it, and usually made fast within two hours.

Mr. Darwin has found that the digestive secretion has an acid reaction like that of the gastric juice of animals, a discovery which doubtless gave him great satisfaction. He likewise thought that he proved the existence of nerve points in the bristles which border the edges of the leaves. Other observers who are disciples of the evolutionists have noticed electrical currents induced by the closing of the traps, such as follow muscular action in animals.

Some of the genera referred to, such, for instance, as Sarracenia, have tube-like leaves lined with inward-pointing bristles. These leaves are baited with a sweetish fluid, which attracts wingless insects within the tube, and they are unable to climb out. So, also, winged insects encounter the introverted hairs in their efforts to escape, and they, too, fall into the little pool of deadly fluid at the bottom of the tube. Of this tubular structure, also, are Darlingtonia, Nepenthes, and Cephalotus. The other genera enumerated at the beginning of this paper have leaves which roll themselves together with their prey inside, or are divided in two parts like a clam-shell, these remaining wide open when ready for a victim, but closing firmly together and interlacing the marginal spines, which, according to Darwin, may be rudimentary nerve-points, as soon as an insect alights on the sensitive surface.—(*Medico-Pharmaceutical Review.*)

THE LIME OR LINDEN TREE (Tilia europæa).

This is one of the most beautiful and most useful of our forest trees. Planted singly it is a tall graceful object, and an avenue of Limes, as is to be seen in the Cathedral yard at

Winchester is not forgotten by the visitor. Such an avenue is grand, and when the flowers are fully expanded in July their fragrance, though powerful, is delicious.

Being well known to and admired by the Romans, it is probable that they introduced it to this country; but whether they did so, or whether it was introduced from Germany, it is certain that it was cultivated in England much earlier than many have concluded. Turner in his "Herbal," published in 1562, says, "Tilia is named in Greek Philyra, in Dutch Linden baum, in English a Lind Tree. It groweth very plenteously in Essex in a park within two miles of Colchester in the possession of one Master Boggis."

Fig. 40.—The Linden Tree.

This leads us to note the absurd corruption of the name of this tree now applied in this country. It has no relation either to the true Lime, which is a Citrus, nor to the earth called lime. The true Englished name is the Line or Linden Tree, a contraction of the Dutch and German name, which alludes to the bark being employed for making cord and other lines.

The usefulness of the tree is great. Its extremely white wood is turned into bowls, bread plates, &c. Its sprays are woven into baskets; it furnishes the cutting-board to shoemakers, and the sounding-boards of pianos; it is largely used for carved work—Grinlin Gibbons's beautiful carvings are of this wood; from its inner bark the mats woven in Russia, and a few in Monmouthshire and Lincolnshire, and so well known as *bast*, are made. This is an Anglo-Saxon name, for in that language *bæst* is the inner bark of a tree. Three millions and a half of these mats are annually exported from Russia, chiefly from the port of Archangel, and more than half a million of them come to England. In southern Europe hats are made of bast, and in Russia the upper parts of shoes; and their soles are made of the outer bark of the Linden. Fishing nets are made of it in Sweden, and in Carniola the shepherds have their usual clothing formed of a coarse fabric into which it is woven. The wood when made into charcoal is employed to form crayon pencils, toothpowder, and gunpowder. The flowers abound in honey, and are as valuable in some districts to the apiarian as is the heather in other localities.

The "Kowno Honey," so highly valued on the continent for making liqueurs and in compounding medicines, is gathered by the bees from the extensive Lime forests near Kowno in Lithuania.

Such being the great utility of the Linden, Pliny justly speaks of it as "the tree of a thousand uses."

The flowers are profusely numerous, and are so peculiarly borne from the centre of large yellowish green bracts, that we add a wood engraving of this mode of inflorescence.

We must not conclude without reminding our readers that the name of the first efficient inventor of botanical classification was derived from this tree. Lind is its Swedish name; and Linnæus was applied to the earliest ancestor who bore it, probably because his dwelling was sheltered by Linden trees.

Fig. 41.—Inflorescence.

TRANSPLANTING VINES, AND THE CUTTING-DOWN PROCESS.

I, LIKE Mr. J. Wright, am delighted to hear of Mr. Blackburn's success in transplanting his old Vines. Now, in the cutting-down process there are great results to be obtained by following Mr. J. Wright's instructions in pages 120 and 121; but still there are greater results to be obtained if Grape-growers,

after cutting down their old Vines within a foot or more from the ground, were to layer them in fresh loam along an inside border where they have an advantage of artificial heat, and allow one or two new canes to form from the layer. They would find, with careful management and a watchful eye, that in a few years they would reap the fruits of their labour equally as good as from young Vines, and in much less time than they could grow young Vines from eyes.—H. S., *Ringwood Gardens.*

EARLY WRITERS ON ENGLISH GARDENING.

No. 3.

JOHN GERARDE.

Gerarde, or Gerard, for it was spelt both ways, was the Philip Miller of his time, for he was a gardener as well as botanist, and in 1597 he thus states his occupation in his address to Lord Burleigh :—"Under your Lordship I have served now by the space of twenty years. To the large and singular of this noble Island I have added from forreine places all the varietie of herbes and flonres that I might any way obtaine. I have laboured with the soile to make it fit for planta—what my succesee hath beene, and what my furniture is I leave to the report of them that have seen your Lordship's gardens, and the little plot of myne owne especiall care & husbandry."

Fig. 43.—Born 1545 at Nampturich, in Cheshire, and died at London in 1611-2.

Where that "little plot" was situated is not exactly known, but he has told us of its whereabouts, for he dates his address to his Herbal's readers :—"From my house in Holborn within the suburbs of London, this first of December, 1597." I incline to believe that his house and garden were about where Ely Place and Hatton Garden are now, and from whence he could readily walk to his patron's, Lord Burleigh's, garden, now occupied partly by Burleigh and Cecil Streets in the Strand. He could visit at the same time another "little plot" of his own, for among the public records are the following :—"Anne Queene of England, &c., for the sum of five shillings by way of fine paid by John Gerrard of London surgeon and herbarist to the King, and for other considerations, but especially of his singular and approved art, skill, and minstrie in planting, nursing, and preserving of plants, hearbes, flowers, and fruits of all kinds, do grant and let to him one garden plott belonging and adjoining to the east part of Somersett or Strand House, abutting on the west wall of the said house, on the east on Strand Lane, on the south on the bank of the River of Thames, and on the north on the back side of the house standing in the high street called the Strand, the said plott containing about two acres, and to be held by him, his executors, administrators, and assigns from the feast of St. Michael next ensuing, for the term of the Queen's life, and for 21 years, paying annually a rent of four pence, to be paid quarterly, and yielding for our own use at the proper seasons of the year a convenient quantity of herbes, flowers, and fruits growing in the said garden, by the art and industry of the said John Gerrard, if they be lawfully demanded of him. Given under our seal at Whitehall, the 14th of August, in the reign of the King the 38th (of Scotland). Endorsed by T. R. Ewens, auditor, 30th August, 1604."

On the back of the Grant is written :—

"27th of June, 1611. Whereas the Queen by her deed dated 14th day of August, in the second year of the reign of James, did grant a garden plott belonging to Somersett House unto John Gerrard, Surgeon, for her life, which John Gerrard by deed dated 26th November, 3rd of James (1605), granted all his estate therein to Robert Earle of Salisbury, who by indenture dated 8th day of April in the 5th year of the reign of James, granted the same to William Goodroud, Surgeon, for twenty years, who afterwards granted and surrendered it to him again, and the Earl again surrendered it to the Queen."

Queen Anne who granted the plot to Gerarde was the consort of James I. She had Somerset House assigned to her as a palace, and her contemporary Howes records—

"Shrove-tuesday, the fourth of March, this year 1616, the Queene feasted the King at her Pallace in the Strand, formerly called Somersett-house, and then the King commanded it should no more be so called, but that it should from henceforth bee called Denmarke-house, which said Denmarke-house the Queene had many wayes repaired, beautified, new builded, and enlarged, and brought to it a pipe of Conduit water from Hyde-park."

It is very near the truth, if not quite, to state that the biographers of our oldest authors troubled themselves very little to be accurate in the dates of events of the lives of those about whom they wrote. If one biographer assigned a date, subsequent biographers accepted it without testing its accuracy. The death time of Gerarde is an example. All who have written about him state that he died in 1607. As he lived and died in Holborn, it would have been easy to consult the registers of St. Andrew's Church in that parish, but no one ever did until within a few days of my writing this I turned over the parchment leaves of those well-kept registers, and in them found this entry :—

"Mr. John Gerrard, freeman of the Barber Chirurgeons, buried the xviii Februarv, 1611." That would have been 1612 had the year then as now commenced in January.

Gerarde was evidently a parishioner of consideration, for he is the only one in that and other years with the prefix of "Mr." All others have at the most merely their Christian and surnames recorded, whilst too many have such a totally useless record as "A poor man" or "A maid from John Smith's," "buried this day."

Contrary to the usual order of biography I have recorded Gerarde's death without any reference to his birth and parentage, an omission caused by my hoping to obtain fuller and original information. This hope has not been gratified, for the Rev. Jortin G. Blackburne, in courteous replies to my inquiries, states that there is no entry of the baptism of Gerarde

in the Nantwich registers from 1539 to 1545, the only early entries, and all subsequent entries are lost down to the year 1572.

The date of his birth has been derived from the Latin inscription round his portrait prefixed to his "Herball"—Englished it is—"Portrait of John Gerarde of Cheshire, citizen and surgeon of London, in the 53 year of his age, 1598." From it we also learn his native county, but the authority for Nantwich being his birthplace does not appear. Ormerod in his "History of Cheshire" merely mentions that Gerarde was born at Nantwich in 1545, and that he was most probably a collateral descendant of one of the great Cheshire families of that name.

The occupation of barber and surgeon were conjoined even among the ancient Greeks and Romans, and continued on the continent and in England throughout the Middle Ages. The Barber-Chirurgeons were incorporated here in 1436, and their Hall was on the west side of Monkwell Street, in Farringdon ward. The two occupations were divided by the statute passed in the thirty-second year of Henry VIII. (1541), for that statute forbade the barber to perform any surgical operation but tooth-drawing. The surgeons thus separated had liberty to dissect executed malefactors, and were required to pass a slight examination as a test of their ability. It is certain that Gerarde never followed the barber occupation, for, as noticed in Queen Anne's grant, he was then "surgeon and herbarist to the king;" and though the company of Barber-Surgeons continued to exist and he was its chairman, yet its occupation was gone, and it was finally extinguished by Act of Parliament in the eighteenth of George II. (1745).

Gerarde's first publication appeared in 1596, being "Catalogus Arborum, Fruticum, ac Plantarum tam Indigenarum quam Exoticarum, in Horto Johannis Gerardi, Civis et Chirurgi Londinensis Nascentium. 1596." It is dedicated to his patron and employer Cecil, Baron Burleigh. He states that his botanical friends had urged him to publish a catalogue of the plants he had collected from most remote regions, and "cultivated in my little suburban garden for some years." It occupies only eighteen small quarto pages and in double columns. The plants are named in alphabetical order from Abies to Zizyphus; they are 1039 in number, and Matthias de Lobel testifies on the last page that he had often seen them all growing in Gerarde's garden.

In the preface Gerarde intimates an intention to publish a larger work on plants, and even alludes to coloured plates. Better advice made him prefer the plain woodcuts with which he illustrated his "Herbal," published in 1597. It is entitled, "The Herball, or General Historie of Plantes Gathered by John Gerarde of London, Master in Chirurgerie. Imprinted at London by John Norton, 1597." It is dedicated to "his singular good lord and master, Sir William Cecil, Knight, and Baron of Burghley, &c." How skilled he was in a knowledge of plants, their history and qualities, that work testifies; and there is prefixed to it this testimonial from "George Baker, one of her Majesties chiefe Chirurgions in ordinarie, and M. of the Chirurgions of the Citie of London."—"I do not think for the knowledge of plants that he (Gerarde) is inferiour to any, for I did once see him tried with one of the best strangers that ever came into England, and was accounted in Paris the onely man, being recommended unto me by that famous man Master Amb. Pareus, and he being here was desirous to goe abroad with some of our herbarists, for the which I was the meane to bring them together, and one whole day we spent therein, searching the rarest simples; but when it came to the triall my Frenchman did not know one to his foure."

There are many other testimonials both in prose and verse, but we can only quote an extract from one written by Thomas Thorney, Master in Chirurgerie.

"Herein (as in a glasse) we see
How thou thy mind hath bent,
Thy bodye toyld, thy time bestowed,
And many a pounde hath spent;
In sleeplesse nights, in restlesse daies,
In places far and neere,
In searching this, in trying that,
In countries here and there."

Whither he travelled we have no specific information, but he intimates he had seen the native Firs growing near Narva, near the Gulf of Finland.

Gerarde founded his "Herbal" on Dodoen's "Stirpium Historiæ Pemptades," published in 1583. This was in Latin, and being translated by Dr. Priest, Gerarde obtained the translation and incorporated with it the plants described by Garcias, Monardes, Cæsalpinus, Camerariscus, Dalechamp, Thalius, Tabernæmontanus, and A. Costa, in addition to the plants brought home by Raleigh and Cavendish, and which were cultivated and nursed in Gerarde's own gardens, and those of Lord Burleigh and others.

The system, if system it deserves to be called, is to divide all known plants into three groups.—1, Grasses, Corn, Rushes, and bulbous-rooted plants; 2, Herbs used for diet, physic, or for ornament or pleasure; 3, Trees, shrubs, fruit-bearing plants, resins, Roses, Mushrooms, &c. The woodcuts had been employed previously to illustrate Tabernæmontanus's "Herbal."

No further example of the absurdity of the three divisions need be quoted than the Potato. It is in the second division, and consequently is associated with the Turnip, Cucumber, Pompion, Crane's-bill, &c.

I have named the Potato because a sprig of its stem bearing leaves, flower, and berry are in Gerarde's hand, as represented in our wood engraving, copied from the frontispiece of Johnson's edition of the "Herball." I believe it was placed there because Gerarde was its first cultivator in England. In that volume, after particularising the Sweet Potato, which he calls "Sisarum Peruvianum, sive Batata Hispanarum, Potatus or Potatoes," he proceeds to the consideration of the common Potato, under the title of "Potatoes of Virginia. Battata Virginiana sive Virginianorum et Pappus." The woodcut and the description demonstrate that the plant he had before him was our common Potato, and he proceeds to observe that "It groweth naturally in America, where it was discovered, as reporteth C. Clusius, since which time I have received roots hereof from Virginia, otherwise called Norembega, which grow and prosper in my garden as in their own native country." After stating the time of its blooming, &c., Gerarde adds, "The Indians call it papus (meaning the roots), by which name the common Potatoes (Sweet) are known to them. We have the name proper unto it mentioned in the title, because it hath not only the shape and proportion of Potatoes, but also the pleasant taste and virtues of the same; so we may call it in English Potatoes of America or Virginia. Being likewise a food, as also a meat for pleasure, either roasted in the embers or boiled, and eaten with oil, vinegar, and pepper; or dressed any other way by the hand of some cunning in cookery."

I hoped to find some indications of Gerarde's family in the registers preserved at Somerset House, but no will or letters of administration are there. So of whether he was married or what were the results of his industry we have no information. Nor could I obtain any information from the registers of St. Andrew's, as those of baptisms in the sixteenth century are lost.—G.

GILBERT'S SEA-KALE AND RHUBARB TUB.

I THINK Mr. Wright is a trifle too enthusiastic in his notice of these tubs for Sea-kale and Rhubarb forcing. Firstly, they are no new invention, but one that has been resorted to as a makeshift for many years. I have used them for twelve years to make up with when short of the usual pots, and several friends of mine have used them for thirty or more years, and during that time have often found them useful, but will agree with me in saying they have not found them so good in any way, nor so cheap in the end, as the usual Sea-kale pot.—T. KEETLEY.

I SEE in the Journal an engraving of a Sea-kale and Rhubarb forcing box used by Mr. Gilbert, which I consider a superior article to the old Sea-kale and Rhubarb pots. Having used them in Scotland some years ago, the idea is not new to me. I can say that they answer the purpose equally as well as the pots. They are cheaper and easier to manage in every way, and not so liable to be broken as the pots. Now that the idea is published I have no doubt but they will become more generally used, as they deserve to be.—JAS. FAIRWEATHER.

PROTECTING PEAS FROM SPARROWS.

THE following is the mode I protect my Peas: Just as they appear above ground my gardener has a piece of wirework netting, about a foot in width, at a cost of about 2½*d.* per yard, which is cut to the length of the row, and is placed on them and left until they are high enough out of the ground, say about 3 inches, when the birds will not touch them, and then they are put on later sorts. When done with they fold into

a small compass, and are put away till the next spring; or will be found very useful put round small beds to protect them from croquet balls, &c.—C. Martin.

ADELAIDE BOTANIC GARDEN.

Dr. Schomburgk's labels are worthy of special note. They stand out with a black-and-white clearness that led to a particular inquiry as to his method. The labels are of sheet iron, and, before painting, a mordant of composition is employed thus—one part chloride of copper, one of nitrate of copper, and one of sal ammoniac are dissolved in sixty-four parts of water, to which solution is added one part commercial hydrochloric acid. The iron labels are brushed over with this liquid, which gives them a darkish colour. In the course of twelve or twenty-four hours they become dry, and to their now dirty-grey surface a coat or two of black oil colour will firmly adhere. When dry the names of the plants are written with white oil colour, and immediately sanded with white sand, which dries with the white paint and becomes compact. On these labels, which resist all action of the weather, Dr. Schomburgk's rule is to print the botanical name of each plant, its natural order, and native country.

The collection of outdoor and pot plants in this garden is understood to be the largest to be found in any kindred institution in the southern hemisphere. There are about eight thousand species. The collection of Cacti and other succulents contains alone six hundred species, and I believe a similar collection is not to be found in Australia. Many of the pot plants which have lately appeared in the European market are already found in the collection, and, notwithstanding somewhat overcrowding in the houses, have a healthy appearance, and show the care with which they are treated. The Orchid collection is also very fine. In 1870 Dr. Schomburgk made the experiment of planting a Palm group at the lower end of the garden with Palms of the following genera:—Latania, Sabal, Chamærops, Rhapis, Cocos, and Phœnix, which seem to have become acclimatised, and are doing well, considering the unfavourable climate for tropical plants.—(*Adelaide Leader.*)

NOTES on VILLA and SUBURBAN GARDENING.

The planting and pruning of evergreens does without doubt concern the occupier of a villa or suburban residence quite as much, if not more, than any other class of interested persons. First, as to the time of planting. He is by compulsion often obliged to depart from the advice given, because the building is unfinished and the ground not put into proper order to receive the plants until very late in the season. Secondly, rather than see his place go bare of these ornaments for a whole season, he is constrained to plant even at the risk of losing many of the shrubs, which he certainly will do if a period of dry weather set in immediately after planting, and if the greatest care is not bestowed upon them by ample mulching and frequent waterings both overhead and at the roots, and this so copiously as to thoroughly soak every particle of soil and reach every root belonging to the plant.

The greatest cause of failure is the lack of attention in these essential points. But this possibly the amateur is unable to do of himself, and to employ others to do it becomes expensive. But even this outlay may be economical in the end; for if planting must be done beyond the season, in addition to the annoyance of several dead and dying plants constantly coming before the eyes, there is the expense again of purchasing others to replace them. But I fancy I hear him say, "What am I to do in such extreme cases?" My answer is, Let planting alone until the proper time, which I consider to be in the early autumn. That is the best time for planting most shrubs, though some of them, if they are large and good balls of earth can be ensured, may be successfully planted during January and February, providing always that the weather be mild and the soil in good condition.

Gardeners of skill, and who know the conditions under which a plant will recover itself after removal, are not so particular as to the time of transplanting, but an amateur's case is very different and must be treated cautiously. The advantages of autumn planting are in my opinion much greater than at any other season. The earth is then warmed by the summer's sun, and the soil is generally in better condition than at any other time. The plants, too, at that season are in the best order for removal, because the roots are still vigorous and growing, and will consequently take hold of the new soil more readily, and quickly establish themselves. This is important, as enabling them to pass through the winter without injury. It is moreover easily seen that by autumn planting almost a season is gained, and they will be likely to thrive much better the following year on account of being early established. What I mean by early autumn planting is in September and October; November planting is only permissible if the weather is mild, and on no account do I advise planting in frosty weather, even if the soil is not frozen hard enough to prevent working it. I think for an amateur it is not wise to advise him to plant evergreens after the month of February, because towards the latter end of March, or sometimes even before then, the weather is dry and frosty with cutting winds, which do more injury to newly-planted shrubs than many people are aware of.

Again, I am of opinion that when the season is getting late and planting has to be done at more risk, the smaller the shrubs planted the better success will attend them, because the roots are more fibrous and close to the stem of the plant, and if necessary to have them brought from a distance more earth can be secured to them. While attending to small plants for late planting I would like to mention that there are some sorts of shrubs, such as Phillyreas, Evergreen Oaks, some sorts of Hollies, particularly the golden-leaved kinds, and Arbutus or Strawberry Tree, which it would be better at all times to select small for planting, because they do not move so well when large, and especially the Evergreen Oak and Phillyrea. These planted too large make no satisfactory progress for a season or two afterwards. The only fault the planting of small plants leads one to commit is that of planting too thickly. The foremost idea at planting time is to produce an effect at once, which is all very good provided a judicious thinning of them takes place every time they are getting too close together, bearing in mind at each thinning to remove in favour of those plants that are to remain permanent.

This brings me to the pruning portion of their treatment, which is of great consequence to an amateur, because in the small space devoted to the shrubbery it ought to be the aim to have as much variation as possible in the outline, with shrubs of different size and colour of foliage to meet the eye at every turn. The pruning consists in merely shortening the straggling shoots every year, when they appear likely to draw the plant away from its natural habit. This will induce the shrub to form a dense body without producing a formal and rigid outline. Shrubs, such as Laurels and Yews, will need more severe pruning than such slow growers as Hollies, Box, Laurustinus, and many others. To keep those last named neat without closeness will only require the leading shoots cut back an inch or two; this is the more necessary on account of their not breaking into growth so well as others of a more vigorous nature. I cannot name a better time than the present for any necessary pruning, as the plants are not likely to start into growth again till all danger from frost is over; it is also convenient as being the season of dressing the borders containing them, so that the whole may possess a neat and attractive appearance throughout the spring months.—Thomas Record.

DOINGS OF THE LAST AND PRESENT WEEKS.

KITCHEN GARDEN.

The weather has been still unfavourable for cropping—frosty at night, and just enough thaw in the day to make wheeling or digging impracticable. Pea sticks can be cut and pointed, and we always prepare a stock of the smaller branchlets for supporting the Strawberries. The Pea sticks should be arranged in the required lengths according to the quantity of each variety that is sown—viz., 3 feet 6 inches for the Veitch's Perfection type, 5 feet for Supreme, and between 6 and 7 feet for Ne Plus Ultra and allied sorts. The sticks should not be tied-up in bundles as is sometimes done, but placed upright with the pointed end downwards. Beech, elm, and hornbeam are well adapted for making Pea sticks.

The earliest Rhubarb is starting nicely into growth out of doors, and, should the weather become warmer, will soon be ready for use. Of course the whole quarter where it has been planted is well covered over with stable litter. *Sea-kale* will be planted out if weather permit. The system of forcing causes us to lift the whole of it, selecting all the roots that are strong enough, retaining all the smaller ones to plant-out. The best of the roots that have been forced are also selected to plant with them, and a sowing is made every year to keep up the supply of healthy young plants. Sea-kale requires a moderately rich soil, but no crude manure should come in contact with the roots. Coal ashes may be dug into the ground or placed over the rows with advantage. The seeds may be sown on well-prepared ground in March, and will then make strong plants by autumn; a number of them will be strong enough for forcing.

FRUIT AND FORCING HOUSES.

Pineries.—Queens are generally so plentiful that any suckers requiring to be removed are usually thrown on the rubbish-heap at this season. Charlotte Rothschild does not throw-up suckers quite so freely, but it is more readily increased than Smooth-leaved Cayenne. Of this last we never have too many, as friends are quite ready to ease us of any surplus stock. It is best not to allow plants that have thrown-up fruit, or are about

to do so, to grow a quantity of suckers. A strong Queen may have half a dozen or more; these should all be removed except one or two near the base of the plants. The other two sorts named do not usually throw-up more than one or two suckers on each plant. The suckers should not be taken off until they are strong, say from a foot to 18 inches in length, as in their earlier stages they grow very much more rapidly on the plant than they do taken off and potted. The ancient system of drying the suckers for a week or more previous to potting them has become obsolete. It is not necessary to dry them for a day; our practice is to pot as soon as they are taken from the plant, and to plunge the pots in a brisk bottom heat at once, but not to water the pots for a week at least; by that time the young rootlets will be forming or formed, and the watering with tepid water encourages them to grow. We had some suckers of a Pine from Pernambuco which came to hand at midwinter; they were not in good condition, but with care we had no fear of their growing. They were potted in the usual way, and should not have been watered for two weeks; however, one of the men by mistake gave them water at once, and the result was, as expected—every one of them began to rot at the base, and the decay spread upwards, so that in a day or two the heart would have been reached. Instead of this they were taken out of the pots, all the rotten part was cut off, and the suckers potted as before. This time water was withheld for two or three weeks, and every one of those suckers made good plants.

Oranges.—The trees that flowered earliest have not set their blossoms so freely as they would have done if the treatment had been different. They were in a vinery where some of the atmospheric moisture was kept up by some fermenting manure on the ground. The ammonia from this was not strong enough to discolour the leaves, nor were the tender leaves on the Vines injured in the least; yet not only did the Orange blossom fall off in showers when the tree was shaken, but many of the young leaves fell off also. Of course the trees were removed at once to another house where the night temperature was from 60° to 65°, and the atmosphere drier. Here an improvement was immediately apparent, and other trees that were started in this house at once made good progress, nor did either leaves or flowers drop off. It is well to set the blossoms with a camel-hair pencil, as bees are not to be found at this season, and the air in the house is scarcely agitated. Syringing is discontinued when the trees are in flower, but they are freely syringed afterwards.

Figs.—The trees in pots are carefully watered until the buds open and fresh roots are formed. When in leaf the Fig takes a large supply of water, and will soon show signs of distress if the soil becomes dry, while it is not uncommon to see the trees become sickly from over-watering. The greatest danger arises from top-dressing the trees instead of repotting them. The surface compost may be quite moist when the soil underneath, which is quite full of roots, may be dry. It is bad management to top-dress Fig trees in autumn; they ought always to be turned out of the pots and repotted at that time. Another advantage obtained from repotting is that the tree has good drainage; not unfrequently this becomes quite choked-up in one season, and the Fig is very impatient of stagnant water at the roots. The trees are freely syringed, which causes the buds to start well, and wards off red spider. It is a great advantage to the trees if they can be plunged in a bottom heat of 85°.

PLANT STOVE.

Potting Ferns.—These in some instances had been growing in the pot for a longer period than was good for them, as the soil had become sodden, and nearly all the roots were dead, yet the fronds had not shown the effects of anything being wrong at the roots; but, of course, the effect would have been visible further on in the year. All the roots that were not sound have been removed with the surrounding soil, and the plants have been repotted in good turfy loam, peat, and sand in smaller pots than they had been growing in previously. Healthy free-growing species have been shifted into larger pots.

Deciduous species of Calanthe are starting into growth; they have been shaken out of the pots and have been repotted. The size of pot is a matter of taste; some growers use 11 or 13-inch pots or pans, and place a dozen or more bulbs in each. The most useful pots for our purpose are 5 or 6-inch, and two large or three small bulbs are potted in each. We drain the pots well, then place some very fibry turf over the crocks and fill up with the compost, which is turfy loam two parts to one part of turfy peat with a little rotted stable manure and sand added to it.

Thyrsacanthus rutilans is a most distinct plant of easy culture, its drooping panicles of scarlet flowers will soon be in full beauty. A mistake is made by retaining the old plants, which if neglected soon become leggy, whereas plants from cuttings struck now or early in March will form good-sized plants with plenty of foliage, and produce a score or more panicles of flowers 2 or 3 feet in length. Turfy loam and leaf mould is a good potting material, and cuttings struck now should by a series of pottings be in 9-inch pots by August or September. As the plant has been introduced from Central America it requires a high temperature. Our plants are grown in the Cucumber house.

Looking carefully over plants that had been bug-infested; the only way to thoroughly destroy this pest is by persistent hunting.

FLOWER GARDEN.

Now is the time that the greatest difficulty is experienced to find room for bedding plants; they are moved out of one vinery after another as it becomes necessary to start the Vines. Melon and Cucumber houses are also required for their respective occupants before the plants wintered in them can be turned out into turf pits or even into cold frames with any degree of safety; however, we have ventured to remove into cold frames plain-leaved Zonal Pelargoniums, Centaureas, Lobelias of the Erinus section, and any other subjects that will not suffer even if the leaves are slightly touched by frost. This has given us an opportunity to clear out the Melon house, which contained tricolor and variegated Pelargoniums; these have been removed to a heated pit, from whence the more hardy subjects had been taken. Cuttings of Verbenas, Coleus, Alternantheras, &c., that had been struck in a high temperature have also been removed to a cooler house, where they will remain a week previous to potting them off.—J. DOUGLAS.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

MR. ORMSON (*J.*).—You have been misinformed. Mr. Ormson, if you mean Mr. Ormson, Horticultural Builder, King's Road, Chelsea, is now ready for consultation there. He was seriously ill, but is quite recovered.

BOOKS (*J. Milham*).—Don's catalogue has long been out of print. The "Cottage Gardener's Dictionary" states all that Don's catalogue does, and gives cultural directions besides.

DWARF KIDNEY BEAN (*E. H.*).—The bean you enclosed is the China Dwarf, or Robin's Egg.

MOWING MACHINES (*Capt. S.*).—They all work well if carefully managed. Write to any manufacturers who advertise in this Journal and tell them what you need.

BLUE CORNFLOWER.—I have often experienced the difficulty "A LITTLE SAVAGE" complains of. Messrs. Dimmick & Sons, Nurserymen, Ryde, Isle of Wight, always supply me with the blue Cornflower true, and will, no doubt, be happy to send seed to "A LITTLE SAVAGE." If not, I will send some of my own saving.—W. D. FOX, *Sandown, Isle of Wight.*

MILDEW ON CINERARIAS (*H. A. P.*).—Dust them and the Geraniums with flowers of sulphur. We do not remember receiving any specimens from you.

REMOVING LARGE CEDARS (*T. S.*).—We know of no one who lets on hire a machine for the purpose.

AJUGA REPTANS (*Marley*).—We do not understand what you mean. There is no variety of Ajuga reptans, and its popular name is Common Bugle. It is portraited and fully described in our "Wild Flowers of Great Britain."

PLANS OF FLOWER GARDENS (*J. G.*).—A new edition of the volume by the late Mr. Fish, with additions by Mr. Luckhurst, is printing.

RED AND PINK ROSES FOR EAST WALL (*E. H.*).—As you want continuous-flowering kinds, Hybrid Perpetuals would be most suitable. *Reds*—Glory of Waltham and Madame C. Joigneaux. *Rose or Pink*—La Ville de St. Denis and Souvenir de la Reine d'Angleterre.

CELERY WITH EARTHY FLAVOUR (*A Constant Subscriber*).—The earthiness is due to the soil employed for earthing being largely composed of decaying vegetable matter, and the remedy is to avoid it, employing sawdust or the Wortley Celery collar, so as to keep the earth from the stems. Salt will not make Celery tender, but it tends to make the plants less susceptible of injury from frost, and destroys slugs and worms.

ASTERS SOWING TO FLOWER IN JULY AND AUGUST (*Alpha*).—Sow the seed the third or fourth week in March in a mild bothed, admitting air so soon as the seedlings appear. Prick-off when they show the second leaves in pans or boxes of rich light soil, keeping them near the glass in the frame. Give air carefully at first, yet hardening the plants well off before planting-out in May.

APPLES KEEPING LATE (*Idem*).—Apples keep longest and most plump and sound in a cellar having a uniform low temperature, or any cool room not so dry as to cause shrivelling. For very late-keeping, place sound specimens in earthenware jars in silver sand, putting on the lid, stop with tape, and seal all round with pitch, placing the jars in a cool and damp rather than dry place. The sand may be removed with a brush. The fruit will keep in this way for a long time.

GERANIUM SEEDLINGS STOPPING—POTTING SEEDLINGS AND CUTTINGS (*Biccps*).—We should not stop the seedlings until the middle of March, and then cut them back to three or four eyes above the soil, keeping dry, and when they have broken turn out of the pots, loosen the sides of the ball, removing any old soil, and pot in the same or a slightly larger size of pot, watering carefully for a time, increasing the supply with the growth. The parts removed may be made into cuttings and potted, and in gentle heat, as

that of a hotbed, they will root freely. The cuttings will flower before the cut-down plants. Pot the cuttings about the middle of March, and put in the cuttings, but without a gentle heat they will not root freely. The proper method of growing Camellias is given in the "Greenhouse Manual," to be had from our office for 10*d*.

Orchids for Fern House (*J. T. S.*).—Masdevallia Harryana, Odontoglossum Alexandræ, O. grande, O. Bictonieuse, O. citrosmum, O. Pescatorei splendens; Coelogyne cristata major, Lælia superbiens, Epidendrum vitellinum majus, Oncidium crispum, Zygopetalum Mackayi, Cypripedium insigne, C. caudatum, C. venustum, and Calanthe vestita. Other plants to flower are Anthurium Scherzerianum, Aphelandra aurantiaca Roezli, Centropogon Luceana, Dalechampia Roezliana rosea, Eucharis amazonica, Franciscea calycina major, Hippeastrum pardinum, Imantophyllum miniatum, Pentas kermesina, and Vinca alba oculata. The highest temperature should be at noon or soon after, and the temperature in dull weather should be 5° higher by day than at night, with sun and air 15° to 20° above the night or minimum temperature may be advantageously allowed. For the temperature you require, fire will be required by day as well as night.

Cuttings of Poinsettias (*Rus*).—Put in the cuttings now, and give them a bottom heat of 75° to 80°, with top heat of 65° to 75°, or more from sun heat. A hotbed will answer very well. The cuttings should be taken from well-ripened wood.

Cydonia japonica Fruit—Seedling Orange (*Mrs. Henderson*).—The fruit of Cydonia japonica is not unlike a small Quince, but square not pear-shaped, and of no use. The trees require to be some age before they fruit freely, but the setting may be effected in young trees by fertilising the blossoms with a camel-hair brush. A seedling Orange will not fruit within five years, but seven or more years commonly elapse before they flower. The plant would be best grafted with a fruitful kind.

Heating Houses (*J. P. of York*).—If we understand you aright you propose to have four rows of piping in the first house or stove next the boiler two flows and the same of returns; and you want to know if the other houses can be heated from these pipes, using both flows and returns. Decidedly so. One of the flows may be taken forward through both houses, and return by a syphon beneath the flow, and will be the return to the boiler for the first house as well as the other two. The other flow pipe will return by a syphon and pipe beneath it to the boiler. You will by this, without further arrangement, always have heat in the two cooler houses as well as in the stove. This will not be necessary at times, and you will need valves upon the flow pipe just before it enters the house next the stove, which we apprehend is a greenhouse, and another before it enters the cool vinery, and these will enable you to work the whole separately or together. You will need also a branch pipe from the flow to the return pipe in the first and second house before the valve to allow of the water returning to the boiler, and this will enable you to work satisfactorily without any loss of pipiug.

Irregular Gardening (*G.*).—Your idea is not good. Glass structures require daily attention. We advise you to be content with out-door gardening.

Aughinbaugh Blackberry.—Miss Hall will feel much obliged for the name of a fruit-grower where she can purchase the 'Aughinbaugh' Black berry, raised in Californoia.

Rose Cuttings in Open Ground (*B. B.*).—The cuttings will now be forming roots, and may be left where they are until April, when they should be taken-up carefully and potted in small pots and placed in a cold frame for a time, being shaded from bright sun, and when they have rooted freely harden well off, and plant-out in the open ground or keep in pots, shifting into larger pots as required, and plunged in ashes in an open but sheltered situation. Instead of potting you may plant them out in an open situation in April, in rows about 2 feet apart, with 6-inch distance from plant to plant, watering if the weather be dry. In autumn they may be planted where they are to remain. Some of the plants after potting or planting will fail, as not all emitting incipient roots become plants.

Libonia floribunda (*A. B.*).—That is the name of the plant of which you sent us a flowering spray. It is a very pretty, free-flowering, greenhouse plant, and was introduced in 1864 from Brazil. It is a softwooded shrub, and of easy culture. It came to this country from German gardens.

Names of Fruits (*A. Bass*).—We regret we cannot identify the Pear you sent. It is quite worthless, and the best thing you can do, if the fruit are all like the specimen, is to graft the tree with a better sort. (*Arcturus*).—1, Easter Beurré; 2, Flemish Bon Chrétien.

POULTRY, BEE, AND PIGEON CHRONICLE.

THE EXHIBITION DORKING.—No. 8.

BY T. C. BURNELL.

For the first fortnight of their lives chickens should be fed at least every two hours, and no amount of care and trouble expended on them will be too much if we wish to rear prize birds. Size is the principal point in a Dorking, and size is only to be obtained by breeding from the finest birds, and by feeding the chickens early and late on the best and most nutritious food. Chickens are awake with the lark; and as it is "the early bird which gathers the worm," we, too, must be up with the lark if we do not wish our chickens to be in the rear when the all-eventful show-day comes. If we happen to have a poultryman who can be depended upon we are indeed lucky, but such are very few and far between, and far better will it be to pay for a little knowledge and become experienced in time than to go on paying high wages to one who very likely knows but little more than yourself, and who will certainly teach you nothing. Two guineas a-week and more are now commonly paid to a first-class poultry manager, and there is but little doubt that if we can afford to keep a poultryman, the best are the cheapest in the end.

After the first day my chickens have whole groats as a staple food, varied with a little hard-boiled egg chopped fine and ground oats mixed very dry. In a week or ten days they will relish small wheat, and occasionally a little chopped meat may be given them as the egg is discontinued. The great point will be neither to let them eat too much at a time nor leave any, so that, if possible, they may always have an appetite at feeding time. If in the hot weather their appetite seems to leave them, a little gentian bark grated into the meal will be beneficial; but as chickens get older they do not require to be fed so often, and the interval between meals may be gradually extended till, at about four months old, they are fed about three times a-day. If new milk can be obtained they will much enjoy a drink of it the first thing in the morning; but too much coddling will only tend to make them delicate.

It will be a very wise course to weed out the chickens as early as possible, as the fewer there are the better they will thrive. Two or three in every brood may generally be selected for the spit without much trouble, as defective and crooked toes and sooty feet will never get any better. No rules can be laid down for certain, but a little experience will soon teach which chickens to keep.

The chickens should not be allowed to perch at night on narrow or crooked sticks, or they will most certainly become crooked-breasted. Some breeders keep their chickens bedded-down on straw or sawdust till their breastbones are fully formed, but this entails much trouble, and I have not found it essential; besides, some chickens have crooked breasts from the day of their birth, and nothing that we can do will then set them right. Till recently I was of opinion that crooked breastbones could be entirely prevented, but from conversations with some of the most careful breeders, and from my own experience, I am convinced that some cases are hereditary, and, like rickets in children, as long as we breed from such we shall never get rid of it. Undoubtedly birds occasionally receive prizes in spite of crooked breasts, but in my opinion a crooked breast in a Dorking, the table fowl *par excellence*, is quite as bad as, or worse than, a crooked leg or wry tail. A slight bend in the bone I would pass over, but a bird which has a large hollow in his breastbone I would not have for a gift, and in my opinion he should never receive a prize. If the chickens are given a flat plank of wood to perch on about 6 inches wide, with the sharp edges just planed off so that they cannot perch upon them, they will be obliged to roost on the centre of the board, and if this is not placed too high up we shall see very little of crooked breasts if the parent birds are not defective in this respect.

At ten weeks old the cockerels and pullets should be separated from one another, as by this means a good deal of trouble will be avoided, and the cockerels will not fight, especially if an old cock be left in charge of them. If a cockerel be taken away for three or four days for an exhibition or other purpose he should always be returned to his comrades at night, or a free fight will very likely be the result; but if the bird on awaking finds himself on his old perching place he will forget all about his absence, and will in all probability in the morning run out with the others as usual. This is very important, as with fifteen or twenty cockerels it would be quite impossible to find separate runs for them all.

I have before mentioned how necessary it is to train birds to a pen before sending them to a show, and this is especially the case with hens and pullets. If two hens are caught and placed in a small pen together they will be nearly sure to disagree, and one will peck the other almost to pieces, even though they have been bosom friends before. A good plan will be to first let them run in a small yard together where there are no other birds, and afterwards to put them in a smaller place, and thus to accustom them to one another by degrees. If after this one bird still remains obdurate, and insists on pecking the other, the only way will be to tie the offender by one leg to the side of the pen; but even this will sometimes not effect a cure, and the only way then to proceed will be to make up another pair. The plan of showing two hens in a pen together is now generally given up, though in my opinion it is a far better criterion of who has the best yard of fowls, and I think the yard which exhibits the largest number of noticed birds is more deserving of credit than that which exhibits one, even though this be the first-prize bird.

The Cup Bristol Hen.—The opinion that I expressed to Mr. Burnell and others, that Mr. Bartrum's cup hen was the same that I was first with at the Palace in 1873, was not intended to be conclusive, and I regret that Mr. Burnell, without referring to Mr. Bartrum first, stated as a fact what was merely a conjecture on my part, owing to the great similarity between the two birds. Having heard from Mr. Bartrum that he was not the purchaser of my hen I can only acknowledge my mistake. My hen was six and a half years old when exhibited at the Palace. I had bred from her that season, and when shown she was in good health and perfect condition. As I had her myself I can make no mistake about her age.—R. W. Beachey.

Fancy Poultry in Jersey.—The seventh annual report of the Jersey Poultry Society has just been published, by which it appears they have a good balance in hand. The Committee

speak strongly in favour of the single-bird system, which they have adopted with success for the last two years. The Society has a bright prospect before it, and we have noticed with pleasure the success of several of its members at the recent Dorchester and Portsmouth Shows. With such prominent fanciers in their ranks we feel sure that the quality of the birds exhibited at their next Show will not retrograde.

KENDAL AND NORTH-WESTERN COUNTIES SHOW OF POULTRY, &c.

(From our Correspondent.)

THE twentieth annual Exhibition of the above Show was held at Kendal, Westmorland, on the 11th, 12th, and 13th inst. The Show is very influentially supported, and from the number and value of the plate and money prizes which the Committee is enabled to offer, it ranks as one of the first in importance in the northern counties of Lancashire, Cumberland, and Westmorland. The Show was held in the large Albert Buildings, Kendal; and there were exhibits from all the first exhibitors in the United Kingdom, and no less than three hundred entries over last year's show. The Exhibition may be briefly summarised as containing 777 pens of poultry and Pigeons, 25 Cats, 345 Dogs —a goodly family to exist together under one roof for three days.

The choice feature in the poultry exhibits at Kendal is invariably the *Game* pens, and the various classes were largely represented by the best show birds in the kingdom. Game *Bantams* were also a large and splendid class; whilst the numerous entries in the Selling classes must have taken up much of the time of the Judges, as is attested by the many commendations made therein. *Geese* and *Turkeys* were very sparsely represented. *Ducks* were in fair numbers, and some very large and fine birds were shown, Mr. James Walker of Rochdale taking the lion's share of the prizes. *Dorkings*, *Brahmas*, *Cochins*, and *Hamburghs* were each full classes, and of very choice quality, whilst *Spanish* was a class of eleven entries.

In *Pigeons* the largest entries were those of Carriers, Owls, Barbs, Fantails, Turbits, Jacobins, and varieties. There were some very beautiful and choice birds exhibited.

The special prize lists for local exhibitors were well represented; but we think that, seeing the number of first-class exhibitors resident in Kendal and neighbourhood, this feature in the Show might be well abolished, for looking to the list of awards the local exhibitors appear to be well able to hold their own against all comers, even though at the Show this year there were Crystal Palace and other principal show winners present.

Cats were a choice though not large exhibition, though in what may be styled the Variety class there were twenty entries; but the other two classes only drew three entries each.

(From our Reporter.)

THIS Show, which attained this year its twentieth birthday, has long been recognised as one of the best of the northern shows. This year it followed the fashion and entered on the single-bird stage of existence, and the entries consequently were in most of the classes numerous and good. The Exhibition was held in the Albert Buildings, and the Judges were Mr. R. Teebay and Mr. Douglas. The Show opened on Thursday morning and ended on Saturday evening, which consequently necessitated the "Sunday business." We are really getting weary of openly condemning this system. The injury to birds, discomfort to exhibitors and their servants, and immense cost of food, gas, attendants, &c., must, we think, strike all clearly. The only way to check it is simply for exhibitors not to patronise those shows which include a Sunday; and really in these days all may pick and choose quite fastidiously, the number of exhibitions being so great. The Show seemed for the most part well and carefully judged, Mr. Teebay's classes especially giving much satisfaction.

Geese, *Turkeys*, and *Waterfowl* opened the catalogue. This always seems to us out of place. Mr. Walker was "all there" in the said classes, and won the cup with his Aylesburys, a truly fine pen. The winning Rouens were grand and well placed. In the Variety Duck class Mr. Burns had his Black East Indians in second, and that in a very army of Carolinas and Mandarins! His drake is rather large, but its colour is superb—as good as any we ever saw. He told us at Bristol we should not be disappointed when we saw it, and we were not. *Dorkings* made four good classes, and, for a wonder, Coloured did not win the cup. Silver-Greys mustered well, and were very good. 54 (Williams), a nice White cock. 62 (Crabtree), a splendid Coloured hen. Wonderful to say, *Brahmas* were only divided as regards sexes, and not in colours. This we were surprised at, for the Lights do muster so well everywhere. The cup went to a grand cock of Mr. Raines, though the first-prize hen must have closely pressed on him for this honour. 90 (Fox), disqualified for trimmed hocks. 100 (Newnham & Manby), a glorious Dark hen. 102 (Walker), a well-marked pullet. *Cochins* mustered well. The first Buff cock is an old friend, having won such an honour many times before. Second a good-coloured bird. Buff hens were a fine lot. We liked pen 123 (Leno), the Fakenham cup hen we believe, as well as the third. In Variety cocks a good Partridge won; second a fair White; and in hens the colours reversed the places. 142 (Woodgate) a good-coloured hen. 148 (Whitworth), ditto. There were also one or two good Blacks in this class. *Game* came to the front nobly. We have so often commented on the winners, or most of them, that we need do so no more. 240A, the cup hen of Matthews's, was not in the catalogue. This must have been a mistake, but we noticed the same at Nantwich, where Mr. Darby's Buff Cochins, which won second, could not be found in the catalogue. We hope secretaries will be as careful as possible to avoid these mistakes, as, although we know how they do occur by accident, some of the wicked world will try to make something out of it. These classes seemed very carefully and ably judged, and we congratulate the winners on winning in such classes, where it was no easy matter to do so. *Spanish* made up a dozen pens. The first and second-prize hens were old friends, and looked as blooming as ever. 262 (Whitworth) a nice pen. Friend "Elijah" seems to have a finger in every pie; we do not doubt he will get many a plum out of this his new venture. *Hamburghs* were a good lot; the winners' names tell us that—just the cream out of all the best yards in the north; but no class for Blacks. We were fairly amazed. We imagined this part of the world was their stronghold. Rectify this immediately, Messrs. Horne and Atkinson! The cup went to splendid Gold-spangles. We fancied we saw in pen 295 (Duckworth) the Hitchen Golden-pencilled cockerel. If we are right, it is a feather in the cap of Mr. Cresswell to have sold a bird worthy of being purchased by a north-countryman, and to be in the list in such company. After this came large Sale classes for the large breeds, which were well filled with more than ordinarily good sale-class birds. Game *Bantams* were large classes and well filled; so were the Black Bantams and the Variety classes. In the latter Laced were first and second, and Pekins third.

Now for just a word of grumbling. We think the catalogues were exorbitantly dear—1*s.* each! Very bad paper, poorly printed, and no prize list printed in the columns! As one exhibitor observed, it was "the dearest bob's worth he had ever had." We ourselves have seen (*e.g.*, Market Rasen) equally good catalogues for 2*d.* each, though not, of course, so large. We furnish full awards below.

DORKINGS (Coloured, except Silver-Grey).—*Cock.*—1, D. Gellatly, Meigle. 2, M. Raines, Bridge Haugh, Stirling. 3, C. Widdas. *Hen.*—1, Mrs. T. W. L. Hind, Kendal. 2, D. Gellatly. 3, G. Fox, Harefield, Wilmslow. *hc*, J. Walker; W. H. Crabtree, Levenshulme; D. Gellatly.

DORKINGS (Silver-Grey or any other variety).—*Cock.*—Cup, J. Walker. 2, J. Cunningham, Sandbrook, Dalbeattie. 3, Hon. Mrs. Howard, Levens, Milnthorpe. *hc*, E. Williams, Heallys Berriew, Montgomery; D. Gibson, Barrhead. *Hen.*—1, D. Gibson. 2, M. Raines. 3, Hon. Mrs. Howard. *hc*, W. W. Rutthdge, Storth End, Milnthorpe. *c*, J. Cunningham.

BRAHMA POOTRAS.—*Cock.*—Cup, M. Raines. 2, H. Lacy, Hebden Bridge. 3, Lady A. B. Pierse, Bedale. *vhc*, W. H. Crabtree. *hc*, M. Raines; W. Scholefield, Birkenshaw; H. J. Bethell, Sedgwick, Milnthorpe. *Hen.*—1 and 2, W. H. Crabtree. 3, C. J. Myers, Dunningwell, Broughton-in-Furness. *hc*, A. Ainslie, Carnforth; Newnham & Manby; J. Walker.

COCHIN-CHINAS (Buff).—*Cock.*—Cup, J. Walker. 2, G. H. Proctor, Durham. 3, J. F. Clarkson, jun., Fernerhalgh, Preston. *hc*, W. Mitchell, Birkenshaw, Leeds; H. H. Jones, Larkhill, Liverpool. *Hen.*—1, G. H. Proctor. 2, J. Walker. 3, R. Hine, Bedlington. *hc*, C. J. Myers; M. Leno.

COCHIN-CHINAS (Any other variety).—*Cock.*—1, T. Stretch, Ormskirk. 2, G. H. Proctor. 3, J. Walker. *hc*, W. Whitworth, jun., Longsight; W. H. Crabtree; H. Lacy. *Hen.*—1, G. H. Proctor. 2, T. Stretch. 3, R. Hartley, Berwick Rails, Millom. *hc*, R. S. S. Woodgate, Pembury; J. J. Waller, Kendal; R. Aspden, Accrington; S. Lawson, Preston.

GAME (Black-breasted and other Reds).—*Cock.*—Cup and 2, C. W. Brierley, Middleton. 3, J. Anderson, Blairgowrie. *hc*, T. Mason, Lancaster; S. Matthew, Stowmarket. *Hen.*—Cup, S. Matthew. 2, C. W. Brierley. 3, J. F. Walton. *hc*, T. Mason; G. C. Barnett; G. Sutton. *c*, R. Garnett.

GAME (Black-breasted and other Reds).—*Cockerel.*—1, T. Mason. 2, W. Boulton, Parkhouse, Dalton-in-Furness. 3, Miss M. J. Nelson, Cockshaw, Hexham. *hc*, Newnham & Manby, Wolverhampton; D. Harley, Edinburgh. *c*, G. Sutton, Bootham, Yorkshire; C. A. Wolff, Altrincham; W. Higgin, Ulverston.

GAME (Any other variety).—*Cock.*—1, J. F. Walton, Hornclife, Rawtenstall. 2 and 3, C. W. Brierley. *hc*, Miss M. J. Nelson; —Dobell, Farnsfield; J. A. Mather; E. Aykroyd, Eccleshill, Leeds. *c*, E. Bell, Burton-on-Trent. *Hen.*—1, E. Aykroyd. 2, J. A. Mather. 3, E. Wigwood. *hc*, J. Gelderd. *c*, W. Higgin E. Brown.

SPANISH (Black).—1, H. Beldon. 2, J. Leeming. 3, W. J. Purvis. *hc*, W. Whitworth, jun.; H. Wilkinson; R. Newbitt.

HAMBURGHS (Golden-spangled).—Cup, T. Dean. 2, J. Buckley. 3, H. Pickles. *hc*, Broadhead & Booth; G. & J. Duckworth (2); H. Beldon.

HAMBURGHS (Silver-spangled).—1 and 2, H. Beldon. 3, W. Barker. *hc*, J. Robinson.

HAMBURGHS (Golden-pencilled).—1, H. Beldon. 2, T. Dickson. 3, G. & J. Duckworth. *hc*, H. Pickles; H. Beldon. *c*, R. Myers.

HAMBURGHS (Silver-pencilled).—1, R. W. Bracewell. 2, J. Robinson. 3, H. Pickles. *hc*, H. Beldon.

ANY OTHER DISTINCT VARIETY.—1, H. Beldon. 2, R. Hawkins. 3, C. H. Smith. *hc*, G. D. Harrison; R. L. Garnett; R. Gladstone, jun.; J. Stainton; H. A. Clark; H. Beldon; Miss H. Robinson; T. S. Tate.

SELLING CLASS.—*Price not to exceed* 80*s.*—1, A. W. Crosthwaite (Dorkings). 2, Furness & Sudall, Rawtenstall. 3, W. Linton (Creves). 4, R. Nesbitt. 5, W. F. Addie (Game) *vhc*, T. J. Harrison (Cochins); W. Hargreaves (Brahmas). *hc*, R. L. Garnett (Crève-Cœurs); J. G. Milner (Houdans); C. R. Kay (Black Spanish); J. & T. Weeks (Cochins); —Ellsworth (Brahmas); Miss E. Hine (Brahmas); T. H. Hine (Cochins); T. J. Harrison (Black Spanish); T. Smart (Hamburghs); J. J. Waller (Cochins); G. F. Whitehouse (Brahmas); J. Moore; R. Youill. *c*, Mrs. T. W. L. Hind; A. Whitehead (Cochins); T. Cartmell (Cochins); G. Pounder (Dorkings).

SELLING CLASS.—*Price not to exceed* 30*s.*—1, R. Nesbitt. 2, T. J. Harrison (Black Spanish). 3, W. Cartmell (Cochins). 4, H. Beldon. 5, Mrs. T. W. L.

Hind (Dorkings). *hc*, J. Walker; J. Fawcett (Rouen Ducks); W. H. A. Miller (Brahmas); J. & T. Weeks (Cochins); R. Craig (Dorkings); T. J. Harrison (Black Spanish); J. W Fawcett (Game); J. N. Stainton (Cochins); T. W. L Hind (Brahmas); J. J. Waller (Cochins); G. F. Whitehouse (Brahmas); J. Brookwell (Aylesbury Ducks); Simpson & Dodd (Cochins); Furness & Sudall. *c*, J. Leeming (Black Spanish); C. H. Wolff (Game).

Game Bantams (Black-breasted and other Reds) —*Cock.*—Cup and 2, Miss M. J. Nelson. 3, E. Walton. *vhc*, W. F. Addie. *hc*, R. Braithwaite; W. Shenton. *Hen.*—Cup and 3, T. Sharples. 2, J. R. Fletcher. *hc*, R. Braithwaite; J. R. Robinson.

Game Bantams (Any other variety).—*Cock.*—1, R. Brownlin. 2, R. J. Hartley. 3, J. Winskill. *hc*, W. Higgin. *Hen.*—1, J. R. Fletcher. 2, R. Brownlin. 3, Miss M. J. Nelson. *hc*, W. Hodgson; R Brownlin; J. Leech.

Bantams (Black).—1, H. Belden. 2, Milner & Beanland. 3, Newsham and Manby. *hc*, R. H. Ashton

Bantams (Any other variety).—1 and 2, M. Leno. 3, H. B. Smith. *hc*, J. Peacock; H. Belden.

Geese.—1, J. Walker, Spring Mount, Rochdale. 2, O. A. Young, Driffield. *hc*, T. W. Brook, Grasmere.

Turkeys.—1, J. Walker. 2, W. Wykes, Leicester. *hc*, J. Brookwell, Wigan.

Ducks (Rouen).—1 and 3, W. Evans, Prescot. 2, J. Walker. *hc*, J. A. Mather, Dumfries; B. Parkinson, Dewsbury; J. Newton, Silsden, Leeds.

Ducks (Aylesbury).—Cup and 2, J. Walker. *hc*, Mrs. Wooton, Nottingham; W. Cannery, Bishop Auckland. *c*, J. W. Breckbank, Kirksanton; W. Wallace, Anchenbrain.

Ducks (Any other variety).—1, J. Walker 2, S. Burn, Whitby. 3, M. Leno. *hc*, J. Walker; H. B. Smith, Preston (3); R. Gladstone, Broad Green, Liverpool; M. Leno.

LOCAL PRIZES.

Dorkings.—*Chickens.*—Cup, A. W. Cresthwaite. 2, H. Arnold. 3,—Rattledge. *hc*, Mrs. T. W. L. Hind; —Rutledge.

Brahma Pootras.—*Chickens.*—1, G. Cartmel. 2, J. A. Dickinson. 3, G. Bethell.

Cochin-Chinas.—*Chickens.*—1, G. Cartmel. 2, J. Hine. 3, R. Cornthwaite. *hc*, W. A. G James.

Game.—*Cockerel.*—1, M. & J. Graham. 2, J. W. Fawcett. 3, R. Laycock. *Pullet.*—1 and 3, Exors. of G. C. Wilson. 2, M. & J. Graham. *hc*, J. Gelderd; T. Cartmel.

Game (Brown-breasted).—1 and 2, Exors. of G. C. Wilson. 3, T. & J. C. Parker.

Spanish (Black).—*Chickens.*—1, T. J. Harrison. 2 and 3, C. R. Kay.

Hamburghs.—*Chickens.*—1, T. Smart. 2, W. M. Mann. 3, C. Roberts.

Bantams.—*Chickens.*—1, Mrs. J. Winskill. 2, R. Braithwaite. 3, J. Winskill. *hc*, Smith & Davis.

Ducklings.—1, R. S. Willison. 2 and 3, G. Cartmel.

PIGEONS.

Carriers.—1 and 2, J. Walker. *hc*, W. Jackson; J. Stanley; H. Yardley; J. & W. Towerson.

Pouters.—1, H. Yardley. 2, J. & W. Towerson.

Antwerps.—1, H. Yardley. 2, J. Stanley.

Tumblers.—1, H. Yardley. 2, W. Brydon. *hc*, J. C. Adams.

Owls.—1, F. Steel. 2, H. Mawdsley. *hc*, D. M. Garside; E. Crook; W. Brydon; H. Yardley; S. Lawson.

Barbs.—1, J. Stanley. 2, J. E. Kendal. *vhc*, J. C. Adams; J. Stanley; H. Yardley. *hc*, J. Furness; H. Crosby; T. Pincock; Miss F. Seanor. *c*, J. C. Adams.

Fantails.—1, J. F. Loversidge. 2, H. Yardley. *hc*, J. Walker; A. Crosbie; F. Steel; Miss F. Seanor.

Turbits.—1 and 2, R. Thompson. *hc*, W. Tedd; H. Yardley.

Trumpeters.—1 and 2, J. & W. Towerson. *hc*, F. Steel.

Jacobins.—1, J. Walker. 2, S. Lawson. *hc*, W. H. A. Miller; H. Crosby; W. Brydon (2); F. Steel.

Any other Variety.—1, J. Stanley. 2, Miss F. Seanor. *vhc*, W. Tedd; H. Yardley. *hc*, D. M. Garside; H. Crosby; J. Stanley; W. Tedd (2); Miss F. Seanor.

CATS.

Black, White, or Black-and-White.—1, J. Just. 2, T. Lancaster. *c*, S. Airey.

Any other Colour.—1, E. Baxter. 2, Mrs. Hudson. *vhc*, N. Townson. *hc*, N Hutchinson; J. Ellis; Mrs. E. Alexander; I. Scatterthwaite; —Knowles.

Foreign (Any variety).—1, B. Hayward. 2, H. W. Clift.

Judges.—Mr. Richard Teebay, Fulwood, Preston; Mr. John Douglas, The Aviaries, Clunmber.

ST. AUSTELL POULTRY SHOW.

This very successful little one-day meeting was held in the Market House on the 13th. There were close on four hundred pens, and it seemed in every way a complete success. Mr. Hodson judged the whole of the Show, and his awards were most favourably received. Turner's pens were used, and the birds were well attended to, and the pens looked fresh and clean.

There were seventeen pens of *Dorkings*, of which the greater part were Coloured. The first-prize pen were good birds, but not over-large. We liked the third-prize pen too; they were well-grown chickens. The Whites were not a grand lot. We thought the Silver-Greys, which were third, worthy of second place before the second Whites, which were small and weedy. *Cochins* were peculiarly classified; Buffs and Whites having one class together, while Partridges had one to themselves. The cup Buffs were, we believe, the cup pen at Dorchester. They are large and fair in colour, but very coarse. The second prize went to a well-shown pair of old Whites, the cock superb in colour and of fine shape; the hen wonderfully leg-feathered and pure white, but a little narrow; still they were well second. Third nice Buffs. 23A (Winwood) a good Buff cock—hocked, but honestly shown. 17 (Waterman) in good condition, but cock looked naked about his hocks. In Partridges a nice pair of Partridge chickens were first, fair old birds being second and third. *Brahmas* made up eighteen entries only with two classes. We cannot conceive why these classes have so fallen off the last few weeks. Darks came first, and here we think was one of the few mistakes Mr. Hodson made. The second pen should have been undoubtedly first. In this pen we believe was the cock first Plymouth, with a nice hen. The other pens were fair. The Lights, though few in quantity, were good in quality; the first being an especially nice pair. *French* consisted of Crêves and Houdans. The winning Hondans were good, the second and third large Crêves. *Game* had three classes, and mustered well. The quality at Cornish shows is generally good. The cup went to good Brown Reds. As in Cochins Buffs always win, or generally, the cup; so in Game, the plate usually seems to go to Brown Reds. The Duckwings were good; first uncommonly so. *Spanish* brought a good class. We believe the first went to a pen which was unnoticed at Dorchester; it was a good hen with a fine cockerel. Second also good, and ditto third; both the latter hailing from Bristol. Altogether it was a capital class. *Polands* were fair. White-crested Blacks of good quality got in second between two nice pens of Silvers. *Hamburghs* had four classes. We really believe if our shows gave the Blacks a class, they would find they soon filled best of all, or certainly next to the Golden-pencilled. Golden-spangles were good, but the Hamburgh cup fell to besutiful Silver-spangles; still Mr. Barter's second-prize pen were admirable, and the third good also. Gold-pencilled were a nice lot, and came out strong. The first (Silvers) were beautiful; the cock's tail quite lovely and in nice condition. *Malays* and Indian *Game* came next. We do not profess to say what the latter are, for we never remember to have seen a pen of the "genuine article." First and third went to Malays; the latter we liked the best in the class by far, and the second to our would-be Indian friends. They looked somehow manufactured. Several other good pens of Malays were noticed. 174 (Elliott) we thought a capital pen. The Variety class was large and good. Nice Black Hamburghs won first, Minorcas second, and good Sultans third. 199A (Nicholls), a good pair of Silkies. Game *Bantams* made a large class, and the winners were well placed. In the next class the cup went to nice Silver-laced; second good Black Rose-combs; and third again to Laced. In Single cock class of any breed a good White Cochin cockerel won first; he reminded us of the bird which won second at the Palace very much indeed. Second and third went to Brown Reds; the third perhaps a shade the best. There were four large Sale classes, two being for the larger breeds and two for the smaller. There were some fair birds, but nothing out of the way good. Rouen *Ducks* were good, the winning pen good in colour and large; the second also nice birds. Aylesburys were few but good in quality; and *Geese* and *Turkeys* quite fair specimens for a local show.

There were not many Pigeons. *Carriers* were as good a class as any. *Antwerps* came out strong, and there were many nice birds among them. *Dragoons* only fair. *Fantails* and *Tumblers* good; and a capital Variety class finished this division, in which good Trumpeters were first and fair Owls second. We give awards below.

Dorkings.—*Coloured.*—1, J. H. Nicholls. 2, Major Carlyon. 3, B. C. D. Greenhill. *c*, M. Bawden. *Any other variety.*—1, J. H. Nicholls. 2, H. Matthews. 3, R. Wilkinson.

Cochins.—*Buff and White.*—1 and Cup, S. R. Harris. 2, R. S. S. Woodgate. 3, B. C. D. Greenhill. *hc*, E. Winwood. *c*, Miss O. M. G. Tremayne; H. Feast. *Partridge.*—1, W. H. Burt. 2, G. Liss. 3, G. Best.

Brahmas.—*Dark.*—1 and 3, G. W. Joyce. 2, T. H. Waterman. *hc*, F. J. Saunders. *c*, W. P. Rogers. *Light.*—1, J. H. Nicholls. 2, J. C. Baker. 3, E. Scammell. *hc*, H. Feast. *c*, J. R. Marriott; J. Nicholls.

French.—*c*, W. H. Copplestone. 2, H. Feast. 3, W. Browne.

Game.—*Black Reds.*—1, G. Goldsworthy. 2, W. H. Cardell. 3, F. Glanville. *c*, H. Feast; T. H. Lukes. *Brown Reds.*—1, Cup, and 2, W. T. Lovering. 3, F. Glanville. *hc*, H. E. Martin. *Any other variety.*—1 and 2, E. Martin. 3, E. Winwood. *hc*, R. Wilkinson; H. E. Martin; J. Phillips; E. C. Pope.

Spanish.—1, S. Burn. 2, Miss E. Browne. 3, Mrs. Tonkin. *vhc*, E. Winwood. *hc*, J. Bassett. *c*, S. R. Harris.

Polands.—1, T. Lecher. 2, G. Liss. 3, J. H. Nicholls. *hc*, Miss F. Solomon. *c*, T. Lecher; H. Feast.

Hamburghs.—*Gold-spangled.*—1, J. Carr. 2, N. Barter. 3, W. Webster. *Silver-spangled.*—1 and Cup, S. R. Harris. 2 and *vhc*, N. Barter. 3, Miss E. Browne. *hc*, J. Carr.

Hamburghs.—*Gold-pencilled.*—1, J. Carr. 2, G. Packham. 3, S. R. Harris. *hc*, P. Hanson. *Silver-pencilled.*—1, H. Feast. 2, *hc*, and *c*, N. Barter. 3, H. Stuttard.

Malay and Indian Game.—1, J. Bone. 2, S. R Harris. 3, J. Hinton. *vhc*, J. Blamey, jun. *hc*, Mrs. J. Partridge. *c*, S. Elliott, jun.; J. C. Baker.

Any other Variety.—1, S. Burn (Black Hamburghs). 2, J. R. W. Williams (Minorcas). 3, J. Nicholls (White Sultans). *hc*, H. J. Lonnon; T. Southerden; —Pearse; J. Nicholls. *c*, W. H. Tippett; J. H. Nicholls.

Bantams.—*Game.*—1 and 3, J. Mayo. 2, Hern & Hockaday. *hc*, J. Honey. *c*, Allen & Osborne; H. Feast; J. H. Nicholls. *Any other variety.*—1 and Cup, N. Barter. 2, J. H. Nicholls. 3, C. H. Poole. *hc*, S. Elliott, jun.; C. H. Poole; H. J. James; J. Pearson; J. Honey; Miss B. Stocker; E. G. Stocker. *c*, J. Honey; G. Holloway; J. Mayo.

Any Variety.—*Cock.*—1, S. R. Harris (White Cochin). 2, W. T. Lovering (Black Red Game). 3, J. Cock. *hc*, J. Bassett; Mrs. J. Partridge; G. Julian. *c*, J. H. Nicholls; W. P. Rogers.

Selling Class.—*Dorkings, Cochins, Brahmas, and French.*—*Cock.*—1, J. H. Nicholls (Cochin). 2, M. Bawden (Brahma). 3, W. H. Cardell (Partridge Cochin). *Hens.*—1, J. H. Nicholls (Cochins). 2, Major Carlyon (Dorkings). 3, J. H. R. Eddes.

Selling Class.—*Any other variety.*—*Cock.*—1, W. T. Lovering (Black Red Game). 2, G. Liss (Polands). 3, N. Barter (Hamburgh). *Hens.*—1, Mrs. J. Partridge (Indian Game). 2, Coon Bros. (Black Red Game). 3, F. E. Stocker (Minorcas).

Ducks.—*Rouen.*—1, H. Cardell. 2, W H Copplestone. 3, J. H. Hoit. *c*, W. Stephens; Hon. Mrs. Tremayne; J. H. Hoit. *Aylesbury.*—1 and 2, S. R. Harris. 3, W. S. Crart. *hc*, W. J. Reynolds

Geese.—1, Mrs. J. Partridge. 2, T. Yelland *hc*, R Nicholls. *c*, C. G. Pedlar.

Turkeys.—1, R. A. Roberts. 2, C. G Pedlar. *hc*, F. C. Ford; H. Hodge.

PIGEONS.

Carriers.—1, *hc*, and *c*, E. Burton. 2, F. Hayman. *vhc*, H. Yardley.

Pouters.—1, J Broad. 2, H. Yardley.

Barbs.—1, J. D. Mole. 2 and *c*, E. Burton. *hc*, H. Yardley.

Dragoons.—1 and 2, R. Woods. *hc*, E. Burton; G. Packham; J. Bacn. *c*, H. Yardley; J. A. Paynter.

Fantails.—1 and *c*, J. F. Loverside. 2, H. Yardley *hc*, G. H. Gregory.

Antwerps.—1, G. Colson. 2, H. Yardley. *hc*, F. G. Voysey; J. Baen. , F. S. Hockaday; M. Bawden.

Tumblers.—1, J. Broad. 2, G. Holloway, jun. *vhc*, H. Yardley.
Any other Variety.—1, J. Broad (Trumpeters). 2, G. Holloway (Owls). *hc*, G. H. Gregory; J. H. Nicholls. *c*, H. Yardley; J. C. Baker (2).
Selling Class.—1, E. Tremaine (Archangels). 2, J. D. Mole (Silver Owls).

[The report was accidentally delayed.—Eds.]

OWL PIGEONS.

Most emphatically, but with the good nature of a brother fancier, I protest against the remarks upon English Owls of "Bubo" in your ever-welcome paper. Keeping, as I do, both English and foreign, I cannot be said to be prejudiced in favour of either; but while admitting the beauty of the tiny foreiguer, there is to my mind no variety more handsome than a first-class really pure English Owl. I am aware some breeders have crossed the two varieties, but I think there is now an end of that mistake. There are of course two standards for Owls, as much so as for the grand Pouter and the graceful pigmy, or the aristocratic Game and its tiny image.

Is not your correspondent behind the times instead of progressing when he advocates only one class for Owls in place of two? For my part I am looking forward with great hope to the time when we shall have a class for each sex, and perhaps for each colour.

Just one hint to Mr. B. Improve one or all the varieties as much as you can; but don't throw cold water on anyone's hobby, and especially on that of—T. G. S., *St. John's Wood*.

CRYSTAL PALACE BIRD SHOW.

The twelfth annual Exhibition of Cage Birds was opened to the public at midday on the 13th inst. In the eighty-one classes for competition there were no less than 1494 entries. A somewhat new feature in connection with the Show was the class for show cages, in which thirty cages were entered. Several cleverly constructed cages were sent for competition, but they were far too complicated in character to meet the views of the Judges so far as being thoroughly adapted for show cages. Several were too gaudy and ill adapted for packing, and others were so constructed that, had they been adopted, they would have entailed too much trouble to secretaries and those immediately connected in packing and unpacking, and otherwise successfully carrying out bird shows. The first prize, a silver medal, was awarded to Mr. T. Alwin of Deptford for a cleverly made cage of moderate size, fit for a show-room either during daylight or gaslight, and of a suitable shape for packing. The second prize of 10*s.* was given to a light-made simply-constructed cage entered by Mr. W. Evans, Manchester; and the third prize to a cage entered by the Rev. V. Ward, Hythe, Kent. The principle upon which the latter cage was constructed was tolerably good, but it was somewhat insignificant in size, and had a slight fault of being rather too deep from front to back. An extra prize of £1 was won by Messrs. G. & J. Mackley, Norwich, for birds gaining the greatest number of points in classes 1 to 6. A silver cup was offered for competition in the Mule classes 30 to 33, which was awarded to Mr. J. Doel of Plymouth.

Mr. F. W. Wilson of the Natural History department and his staff are deserving of praise for their exertions. It must be very gratifyiog to Mr. Wilson to find the entries have increased three hundred over the preceding Cage Bird Show.

We shall continne our report next week. The following are the awards:—

Norwich (Clear Yellow).—1, R Whitaker, Darley Abbey. 2, G. & J. Mackley, Norwich. Extra 2, J. Calvert, Bootham 3, J. Athersuch & Son, Coventry. Extra 3, P. Flexney. *vhc*, S. Tomes; G. & J. Mackley; J. Athersuch & Son (3) *hc*, J. Doel; S. Tomes (3); T. Smith; Moore & Wynne; P. Flexney (2); W. O. Hayes; T. Fenn (2). *c*, G. H. Goulter; R. J. Pope; G. & J. Mackley (2); P. Flexney; J. Price; A Colman; J. Drake.

Norwich (Clear Buff).—1, J. Athersuch & Son. 2, G. & J. Mackley. 3, J. Caplin, Canterbury. Extra 3, — Radmore, Plymouth; J. T. Galey, Clapham. *vhc*, Rev. G. Herbert, Alcester; J. Clarke; Moore & Wynne (2); J. Athersuch and Son; A. Coleman; W. Walter, Winchester (2); G. Y. Collinson. *hc*, J. Doel (2); S. Tomes; T. Smith (2); G. & J. Mackley; P. Flexney; J. Athersuch and Soo; W. Evans; G. Y. Collinson. *c*, G. H. Goulter; J. Price; G. Y. Collinson.

Norwich (Marked or Variegated Yellow).—1 and *vhc*, J. Adams. 2, Orme and Ashley, Derby. 3, G. & J. Mackley. Extra 3, J. Athersuch & Son. *hc*, G. and J. Mackley; W. Bichards; W. & C. Burniston.

Norwich (Marked or Variegated Buff).—1, G. & J. Mackley. 2, Orme and Ashley. Equal 2, J. Athersuch & Son. 3, J. Caplin. Equal 3, S. Tomes. *vhc*, Moore & Wynne; G. & J Mackley; A. Colman (2); Orme & Ashley. *hc*, B. Whitaker (2); J. Adams; W. Richards; W. Walter. *c*, J. T. Galey; G. and J. Mackley.

Norwich (Ticked or Unevenly-marked Yellow).—1, J. Dennis, Croydon. 2, Rev. G. Herbert. 3, P. Flexney. Extra 3, G. & J. Mackley. *vhc*, P. Flexney; T. Newmarch. *hc*, J. Adams; A. Colman. *c*, J. T. Galey; A. Colman.

Norwich (Ticked or Unevenly-marked Buff).—1, J. Price, Pimlico. 2, J. Adams. 3, G. Y. Collinson, Norwich. *vhc*, J. Doel; J. Clark; W. Walter. *hc*, C. Arscott; G. & J. Mackley; J. Drake; G. Y. Collinson. *c*, W. R. Hovell.

Norwich (Clear and Ticked, high colour).—1, 2, and Extra 2, J. Adams. 3, W. Walter. Extra 3, J. Athersuch & Son. *vhc*, J. Doel; J. Adams (5); R. J. Pope; J. Athersuch & Soo (3); Orme & Ashley. *hc*, W. Havers; J. Adams (2); J. Athersuch & Son (2); G. Y. Collinson. *c*, S. Tomes; J. Caplin; W. Havers; Moore & Wynne; G. & J. Mackley (3); Atherauch & Son (3); G. Y. Collinson (3).

Norwich (Marked or Variegated, high colour).—1, G. & J. Mackley. 2 and *vhc*, J. Adams. 3 J. Athersuch & Son.

Norwich (Evenly-marked Crested Yellow).—1, — Radmore. 2, F. Woodward, Derby. 3, J. Tarr, Thornhill Place, London. *vhc*, G. & J. Mackley.

Norwich (Evenly-marked Crested Buff).—1, F. Woodward. 2, W. B. Hovell, Norwich. Extra 2, G. & J. Mackley. 3, J. & W. Waller, Finsbury. Extra 3, Moore & Wynne. *vhc*, G. & J. Mackley (3); Martin & Griffin. *hc*, R. B. Newsom; G. Cox. *c*, Mrs. H. T. Lewis; J. & W. Waller; G. Wones; Moore and Wynne; G. & J. Mackley (2); A. Colman (2); G. Cox.

Norwich (Ticked or Unevenly-marked Crested Yellow).—1, G. & J. Mackley. 2, Rev H. Caiger, Pimlico. 3, R. J. Pope, Brighton. *vhc*, F. Woodward; J. Adams; W. B. Hovell. *hc*, G. Cox.

Norwich (Ticked or Unevenly-marked Crested Buff).—1, G. & J. Mackley. 2, G. Y. Collioson. Extra 2, R. Hawman, Middlesborough. 3, A. Colman. Extra 3, F. Woodward. *vhc*, G. & J. Mackley (2); G. Y. Collinson; G. H. Goulter. *hc*, J Caplin; Rev. H. Caiger; J. Tarr; A. Colman; W. Corden; J. Goode; G. Y. Collinson. *c*, J. Tarr.

Norwich (Clear, Grey, or Dark Crest, irrespective of colour).—1, G. & J. Mackley. 2, J. Clark, Derby. Extra 2, Martin & Griffin, Northampton. 3, W. B. Hovell. *vhc*, W. Havers; Moore & Wynne; G. & J. Mackley (3); W. B. Hovell. *hc*, F. Woodward; S. Tomes; J. Tarr; Mrs. F. Nicholson; G. & J. Mackley; A. Colman (2). *c*, S. Tomes; S. Moffatt; Brown & Gayton (2); J. Tarr; Mrs. F. Nicholson; G. & J. Mackley (2); G. Cox; Martin & Griffin; W. Corden; J. Goode.

Belgian (Clear and Ticked Yellow).—1, S. Tomlin, Wainfleet. 2 and 3, J. Doel, Stonehouse. Extra 3, T. M. Reid, Halifax. *vhc*, Rev. H. F. Hamilton; J. Rutter (3). *c*, T. M. Reid; J. Rutter.

Belgian (Clear and Ticked Buff).—1, 3, and Extra 3, J. Doel. 2, Rev. H. F. Hamilton, St. Nicholas Vicarage, Chard *vhc*, Rev. H. F. Hamilton; T. M. Reid; J. Rutter. *hc*, V. Sandford; J. Rutter (2). *c*, H. Davies; V. Sandford.

Belgian (Variegated, irrespective of colour).—1, 2, 3, and *vhc*, J Rutter.

London Fancy (Jonque).—1, J. & W. Waller. 2, W. Brodrick, Chadleigh. 3, J. Price. *vhc*, T. Mann; J. & W. Waller. *hc*, J. Price; J. McMillin.

London Fancy (Mealy).—1 and 2, J. & W. Waller. 3, T. Mann, Langton Road, London. S.E. *vhc*, J. Price (2). *hc*, C. Willmott.

Lizard (Golden spangled).—1 and Equal 2, T. W. W. Fairbrass, Canterbury. 2, Clemmson & Ellerton, Darlington. 3, S. Bunting. *vhc*, T. W. W. Fairbrass; S Bunting; G. Tuckwood. *hc*, R. B. Newsom; Cleminson & Ellerton. *c*, Mrs. J. Chinery; Rev. V. Ward.

Lizard (Silver-spangled).—1, T. M. Reid. 2, 3, and *vhc*, T. W. W. Fairbrass. *c*, R. B. Newsom; G. Tuckwood; B. Harrison.

Lizards with Broken Caps (Gold-spangled).—1, 2, Extra 3, *vhc*, and *hc*, T. W. W. Fairbrass. Extra 2, S. Bunting. 3, Clemmson & Ellerton. *c*, C. Hibbs; G. Tackwood.

Lizards with Broken Caps (Silver-spangled).—1, 3, and *vhc*, T. W. W. Fairbrass. 2, G & J. Mackley. *hc*, C. Hibbs; G. Tuckwood; Rev. V. Ward.

Yorkshire (Clear, Marked, or Variegated, irrespective of colour).—1, 2, and Extra 3, L Belk. 3, S. Tomlin. *vhc*, G. & J. Mackley; J. Wilkinson. *hc* and *c*, R. B. Newsom.

Cinnamon (Jonque, high colour).—1, 2, and 3, J. Adams. *vhc*, C. Torond; J. R Navlar (2). *hc*, J. & W. Waller (6). *c*, J & W Waller (2); W. Corden.

Cinnamon (Buff, high colour).—1 and 2, J. Adams. 3, G. & J. Mackley. Extra 3, C. Torond. *vhc*, C. Torond; J. & W. Waller (2). *hc* and *c*, J. & W. Waller.

Cinnamon (Jonque).—1, J. Caplin. 2, R. Poole. 3, J. Bexson. *vhc*, S. Tomes; Moore & Wynne; Cleminson & Ellerton; J. & W. Waller (2); J. Bexson. *hc*, J. R. Naylar. *c*, Moore & Wynne; G. & J. Mackley; A. Dixon.

Cinnamon (Buff).—1, J. Adams. 2, Moore & Wynne. 3, J. Bexson. *vhc* Moore & Wynne; J. Adams; G. & J. Mackley. *hc*, J. R. Naylar; J. & W. Waller; J. Bexson. *c*, W. W. Johnson; N. Walker (2); J. & W. Waller (3) R. J. Pope; Martin & Griffin.

Cinnamon (Marked or Variegated, irrespective of colour).—1, L. Belk. 2, J. Wilkinson. 3, S. Tomes. *vhc*, G. & J. Mackley. *hc*, W. & C. Burniston.

Any other Variety of Canary.—1, G. & J. Mackley (Yellow Lancashire Coppy). 2, T. Curtis (Lancashire Coppy). 3, S. Tomes (Marked). *vhc*, W. Selkirk (Scottish Don) (2); G. & J. Mackley (Yellow Lancashire Plainhead); J. Stevens (Lancashire Coppy). *hc*, Misses E. & J. Baxter (Scotch Fancy).

Goldfinch Mule (Evenly-marked Yellow).—1, 2, and *hc*, J. Doel. 3, R. Hawman. *vhc*, Major C. H. Fisher; G. & J. Mackley; J. Wilkinson.

Goldfinch Mule (Evenly-marked Buff).—1, 2, and Extra 3, J. Doel. Extra 2, S Bunting. 3, J. Stevens. *vhc*, R. Poole. *hc*, R. Poole; Hampton and Chamberlain. *c*, G. Butts.

Goldfinch Mule (Any other class of Yellow).—1 and 2, J. Doel. 3, J. Caplin Extra 3, S. Tomlin (2). *vhc*, J. Goode *hc*, J. Doel; J. Bexson.

Goldfinch Mule (Any other class of Buff).—1, 3, and Extra 3, J. Doel. 2, Misses E. & J. Baxter. Equal 2, A. Boatwright. *vhc*, Major C. H. Fisher; G. and J. Mackley *hc*, J. Mount.

Goldfinch Mule (Dark Jonque).—1, R. Hawman. 2, Moore & Wynne. Extra 2, G & J. Mackley. 3, Hampton & Chamberlain. *vhc*, W. Selkirk; J. Athersuch & Son; J. Goode; J. Bexson; Moore & Wynne. *hc*, J. Bexson; R. Hawman. *c*, M Flynn; W. & C. Burniston.

Goldfinch Mule (Dark Mealy).—1, G. Cox. 2, S. Bunting. 3, Moore and Wynne. *vhc*, G. F. Hedley; G. Cox. *hc*, Brown & Gayton; J. Reeks. *c*, T. Muldoon; J Reeks.

Linnet Mule.—1 and 2, J. Spence. 3, J. Stevens. *vhc*, H. Thompson, jun.; G. Cox *hc*, G. & J. Mackley; F. Stiston; S. Cook. *c*, S. Newing.

Any other Variety of Canary Mule.—1, R. Hawman. 2, T. Alwin. 3, Misses E. & J. Baxter. *vhc*, P. E. Pearce. *hc*, G. & J. Mackley; E. Gilbert.

Six Norwich Canaries in One Cage (Irrespective of colour).—1, Mrs. M. Judd. 2, 3, and Extra 3, G. & J. Mackley. *vhc*, W. Walter; J. Bexson.

Six Lizards in One Cage (Irrespective of colour).—1, T. W. W. Fairbrass. 2, S. Bunting. 3, Cleminson & Ellerton.

Six Goldfinch Mules in One Cage.—1, J. Doel.

Finch Mules (Any other variety).—1, J. Brown, jun. 2, J. Doel. 3, E. Sandell. Extra 3, J. Reeks. *vhc*, J. Calvert; Misses E. & J. Baxter. *hc*, E. Sandell. *c*, Mrs. M. Priseman (2); J. Goode; E. Sandell (2).

Bullfinch.—1, Major Edwards. 2, J. Drake. *hc*, J. Goode; T. Newmarch. *c*, G. Cox; E. Gilbert; Cleminson & Ellerton; Fellingham & Wiogfield.

Goldfinch.—1, J. Doel. 2, R. Hawman. *hc*, R. J. Troake; T. Willsher; J. Drake; G. T. Harrison; S. Bunting. *c*, G. Cox; T. W. W. Fairbrass; E. H. Sweeting (2); J. Irons.

Chaffinch.—1, T. Alwin, Deptford. 2, Fellingham & Wingfield. *hc*, Miss N. Mohr. *c*, W. R. Alwin; Misses E. & J. Baxter.

Linnet.—1, R. R. Cannon. 2, Clemmson & Ellerton. *hc*, Misses E. & J. Baxter. *c*, S. Bonting; J. Stephens; Mrs. Furneaux.

Redpole or Siskin.—1, T. Newmarch. 2, G. & J. Mackley. *hc*, Fellingham and Wingfield. *c*, W. & C. Burniston.

Skylark —1, Mrs M. Judd. 2, N. Walker. *vhc*, T. Willsher; W. Walter; T. Newmarch. *c*, J. Drake; J. S. Benton; Fellingham & Wiogfield.

Robin.—1, G. Cox. 2, Miss N. Mohr. *hc*, Major Edwards; H. B. Tilney.

Blackbird.—1, R. J. Troake. 2, G. & J. Mackley. *hc*, W. R. Alwin. *c*, J. Battershill.

Song Thrush.—1, T. Newbold. 2, A. W. Sweeting. *hc*, R. J. Troake; A. Colman; Madams Gallo; C. J. Watson. *c*, F. Glazier.

Starling.—1 and 2, Miss E. Hawkins. *hc*, G. Cox.

Jackdaw.—1, Dr. E. Waller. 2, E. Todd.

British Birds (Any other variety).—1, W. H. Allcorn. Equal 1, Miss N. Mohr (2); J. Young. 2, T. Willsher. *hc*, Rev G. Herbert.

Blackcap.—1 and 2, C. Varetti. *hc*, O. A. Watts. *c*, Miss N. Mohr.

Nightingale.—1, O. A. Watts. 2, — Lilley. *hc* and *c*, H. B. Tilney.

Any other Variety.—1, H. B. Tilney (Yellow Wagtail). 2, N. Walker (Titlark). Equal 2, O. A. Watts (Lesser Whitethroat).

FOREIGN BIRDS.

Widah Birds.—Prize, E. H. Sweeting.

Cardinal (Redheaded).—Prize, Mrs. A. Sambrook. *vhc*, J. Drake; E. Hawkins. *hc*, T. Daniels.

Nightingale (Virginian).—Prize, W. Walter. *vhc*, G. Billet. *hc*, E. Hawkins. *c*, T. Newmarch.

Waxbills (Any variety).—Prize and *vhc*, T. Newmarch. *hc*, E. Hawkins. *c*, Mrs. M. Judd.

Sparrows (Java).—Prize, W. Walter. *hc*, E. H. Sweeting (2). *c*, Mrs. Furneaux.
Sparrows (Diamond).—Prize, Mrs. A. Sambrook.
Doves (Barbary or Ring).—Prize, T. Newmarch. *hc*, W. Travis; W. C. Clark; J. Loutchford; — Kingston. *c*, W. Travis.
Love Birds.—Prize, Mrs. M Judd *hc*, T. Newmarch.
Parakeets (Australian Grass)—Prize, Mrs. H. Beattie. *hc*, T. Newmarch; J. Drake. *c*, E. Hawkins; T. Newmarch.
Cockatiels.—Prize, Mrs. W. C. Drummond. *hc*, W. Walter. *c*, J. Groom.
Small Parrots or Parakeets (Any other variety),—Prize, Mrs. W. Mostyn. *vhc*, Mrs. W. C. Drummond. *hc*, J. Yallop.
Parakeets (Australian or Broad-tail)—Prize, T. Newmarch.
Parakeets (Ring-necked or Indian).—Prize, J. Drake. *vhc*, C. Torond. *hc*, H. Cross; F. Saunders. *c*, W. T. Fitcomb; W. Walter; S. Cook.
King Parrots.—*vhc*, S. Bunting. *hc*, J. Drake. *c*, Mrs. W. C. Drummond.
Parrots (Green or any other variety of large, except Grey) —1, S. J. Wade. 2, Mrs. Scott.
Parrots (Grey).—1, Mrs. Segrave. 2, Mrs. W. Huskinson. *hc*, F. H. Cudd. *c*, Hon. and Rev. F. Dutton.
Cockatoo (Any other variety).—Prize, T. Newmarch. *hc*, A. Vicars.
Cockatoo (Leadbeater or Rose-breasted).—1, W. Walter. 2 and *hc*, J. Battershill.
Cockatoo (Lemon or Orange-crested) —1, M. George. 2, Mrs. W. H. Wyeth.
Foreign Birds (Any other variety).—1 and Extra 1, E. Hawkins. 2, J. Drake. Extra 2, Mrs. E. Cross; C. W. Gedney; E. Hawkins. *hc*, Mrs. M. Judd; J. Drake; W. Walter; Madame Gallo; Miss W. Pope; E. Hawkins. *c*, J. Drake; W. Walter (2); Madame Gallo; J. Groom; T. Newmarch (3).
Extra Prize to the winner of the most points in the first six classes.—G. & J. Mackley.
Silver Cup for the greatest number of points in classes 30, 31, 32, and 33.—J. Doel.

Judges.—*Canaries:* Mr. G. J. Barneshy, Mr. A. Willmore, Mr. R. L. Wallace. *British and Foreign Birds:* Mr. Harrison Weir, Mr. J. Jenner Weir, assisted by Mr. F. W. Wilson.

PURE WATER.

"Water that is fresh and pure
Gives to life what will ensure
Health, growth, productiveness!"

The importance of a plentiful supply of pure water for live stock cannot be over-estimated. To quench thirst is not the ultimate end or only purpose of water. The desire that is created for drink is occasioned by a feeling termed thirst, similar to a desire for food through a sensation of hunger. These are but the demands of the inner being, the act of satisfying such but a physical exertion, while the article drank enters into the composition of blood, bone, and flesh, maintains a greater per-centage than other component parts, and is one of the essentials of life.

In a pure state, water (as it is indispensable) sustains existence; while, if impure, it, like a poison, affects the entire system, occasioning many diseases that are attributed to other causes through the attachment of so little importance to the vital necessity of using the pure aqueous fluid.

Pure water may be considered just as essential to life and growth as is pure air, and upon the advantages of a free circulation of air medical authorities have written volumes, attributing so much to it as to believe its condition sufficient to make a person sick, cause death, alter body and mind; while with water the influence must be decidedly greater.

The tendency of water to absorb noxious effluvia is one great reason why it becomes unfit for drinking purposes after standing close to such impurities; and there is no greater source of unhealthfulness than where there is allowed to accumulate decayed vegetable matter or animal excrement, particularly with that of the feathered creation.

All gaseous contagious matter are substances in a state of decomposition, and water in the presence of such gases being an absorbent, soon becomes turbid, or, so to speak, putrefies by the process of decomposition, which is completed in the water. It so remains unchanged, unless subject to the filtering process it undergoes in the earth, when vegetation, having a stronger affinity for such gases, extracts them from the water, and it again becomes pure and fit for drinking purposes.

Furthermore, the vitality and productive qualities of live stock are increased or diminished through the effects (resulting from the nature) of the article which becomes the means of their productiveness; in an egg, for example, the white contains 53, the yolk 79 per cent. of water, and it reasonably follows that the quality of the egg is dependant upon the nature of its largest constituent part.

Small bodies of water when left exposed to the sun's rays lose their freshness and satisfying qualities; and with fowls there is either too much drank, causing intestinal diseases, or too little to enable a sufficient moistening of their food to ensure a proper digestion, either of which retards the functions of the organs, and interferes with the health and profit of the stock.

Vessels used in watering stock should receive a proper cleansing before being used a second time; if not, any impurities that may remain in the previous surplus supply, or that may adhere to the sides of the vessel, will taint the fresh water, and in time cause a smell that will be objectionable.

Rain water should not be permitted to accumulate so as to be accessible for drinking purposes for stock, as it contains the impurities of the atmosphere, which being very acceptable and beneficial to plant life, are just the contrary to animal existence.

It is the belief of the writer that many of the diseases incident to poultry are due to neglect in providing them with pure water; particularly do I believe such to be the case in the majority of instances where chicken cholera prevails. One writer has attempted to account for the contagious nature of this and other fatal distempers by saying that unhealthy fowls will impart to the water from which they drink their particular disorders, and that other fowls that may drink afterwards become similarly affected; but this is not accounting for the first cause or origin of such fatalities, and hardly seems possible; but the infection of such diseases could reasonably be imputed to the vitiated state of the water consumed.

The omission to furnish fowls with suitable drinking water is one of the worst features of cruelty to animals. It is a neglect that is decidedly adverse to success, hence tends to diminish individual fancy for fowls, and works detriment to poultry interests. Those whom we occasionally hear say that "there is no profit in poultry" are not qualified to have the management of the same, and in their attentions may be classed with the thriftless and neglectful parties who keep fowls that get drink when it rains.

Let every owner of live stock, among other attentions, see that such are supplied with a sufficient amount of pure water, and they will not have occasion to regret that the said stock are not as profitable and thrifty as they might be.—(*American Fanciers' Journal.*)

LIGURIAN BEES.

For two or three years I have been under the impression that all thoughts as to the superiority of Ligurian bees over the common sort have been fast dying out. I have never believed they possess any superior powers or qualities, and therefore have been rather pleased to think that all earnest apiarians would soon settle down with the conviction that the common English bees are in no sense inferior to any other sort yet discovered, and that the apiarians would commence to give them ample scope for the development of their breeding powers and industry, and store room enough for honey, instead of seeking novelties; for if profit or honey be the aim of bee-keepers, they will find in the end that the pursuit of novelties is very unsatisfactory and costly. For many years I have been waiting and looking out for evidence of the superiority of Ligurian bees. I have seen almost all that has been published in this country in their favour, and much that has been written and spoken in America, but never have I seen anything that proves they are better in any sense than the common English bees. Almost all that has been written and published in their favour has come from breeders and importers of Ligurian bees. For many years we have had some opportunities of seeing Ligurians at work and examining their hives, and never once have they furnished us with evidence of any superiority at all; and so far as I have read the discussions on the relative merits of Ligurian and common bees in the annual conventions of American bee-keepers, the weight of disinterested evidence was certainly not in favour of Ligurians. Some years ago I cut a letter touching this question from the *New York Tribune*, and sent it to the late Mr. Woodbury. The writer had tried Ligurians for some years, and so far as honey-gathering went the trial was a comparative failure. He said they were good breeders but poor honey-gatherers.

Last year I heard of a lady in the north of Scotland who gives prizes every autumn for the heaviest swarms, and that Ligurians had carried off the laurels for one or two seasons. From inquiries I have made the report seems to be correct. We have also the fact before us, already recorded in the *Journal of Horticulture*, that Mr. George Campbell had last year a gross weight of 373 lbs. from a stock hive of Ligurians and its swarms. Mr. Campbell is a very intelligent and able apiarian, and the season in Aberdeenshire, where he lives, was very favourable for honey-gathering; he has in two or three private letters to me expressed his opinion that the Ligurians are better than the common sort of bees. He says that the Ligurians fill larger hives, and fancies that the breeding powers of the English bees can be improved by crossing or culture. Two swarms of common bees in the same country went together last year, and gathered about 40 lbs. more than Mr. Campbell's first swarm, which was 126 lbs., the united swarm gathering about or above 160 lbs. In the heavy swarm there does not appear any deficiency of the breeding powers of the queen, and we well know that hives a little larger than Mr. Campbell's have been filled elsewhere by simple swarms of common bees. Still, he has the fact of 373 lbs. gross weight before us, and I can remember but one instance of common bees doing better than, or even as well as this.

Is there no way of testing by a public trial or competition which sort of bees is the best? Is it not possible to have a Derby day in the apiarian world without a manifestation of temper and ill-feeling? I think it can be done. Surely no right-minded apiarian would object to a fair and honourable contest between English and Ligurian bees. Though my old

servants are prodigious favourites, I shall not be hurt at all by knowing that other people have better servants, possessing greater powers of locomotion, of work, and of endurance. The person who shall give me satisfactory evidence of this will be looked on as my friend and benefactor. It is not bald statements we want, but the evidence of facts. The intelligence of England will do homage to such evidence.

May I venture to ask the apiarians of Great Britain to help in promoting a fair trial of strength this year, according to a programme which may be suggested by some one and fully considered by the public? Many would be much pleased if the Bee-keeper's Association would take up this matter heartily. I was much pleased to read a letter from the Hon. and Rev. Mr. Bligh (I think he is the Chairman of that Association), suggesting the offering of large prizes for the greatest quantities or weight of honeycomb obtained from any kind of hives or system of management. I am of opinion that the acting Committee will command the general respect and confidence of bee-keepers if they move in that direction, and endeavour to reward and publicly notice the greatest, most exemplary, and encouraging successes in bee-keeping; and thus the best kinds of hives and the best systems of management will come to the front, and be known throughout the land. Prizes, I think, should be offered for the heaviest hives and the heaviest swarms (hives filled by swarms), managed under any system; as well as for the greatest produce of honeycomb from one stock. In some parts of Great Britain there is a great demand for run honey, and very little for honeycomb. The bee-keepers there, like Mr. Campbell, enlarge their hives by eking instead of supering. If a great prize could be raised and offered for the greatest results, not excluding a mother hive and its swarms, exhibited in their entirety, a great step would be taken to enlighten the country as to what bees really can do under favourable circumstances and good management. The expenses of carriage in this last case would be very great if the competitors lived at a distance, and therefore large prizes only would tempt them to compete. I believe with the Hon. and Rev. Mr. Bligh, that a few grand prizes offered for the products of able and comprehensive management would be more attractive and create a greater interest in the exhibition than swarms of supers, which he terms "fancy goods," the prizes for which may be carried off by mere novices in bee-keeping. Acting on broad and open principles the Committee will be amply supported and encouraged.

I have to say in conclusion that I trust the suggestions of this letter will be read in the spirit in which they are written, and that in the event of an arrangement being made for testing the powers of Ligurian and English bees, I shall gladly lend a few swarms of the latter sort to any respectable bee-keepers who may undertake to enter into the contest. I am too old now to engage actively in this kind of work.—A. Pettigrew.

OUR LETTER BOX.

Dorkings' Toes Swollen (*R. Walker*).—There are two causes, either of which may account for the disease in the feet of your Dorkings—fighting through wire netting, or living entirely or partly on a level or plain surface. If, however, neither of these exists with you, we should advise constant bathing, and a cold water bandage applied as soon as the swelling is observed. We have known similar instances where the toe is very large.

Fowls for Egg-laying (*Blox*).—Houdans or Dark Brahmas. Begin with a cock and four hens, increasing the number if you find your accommodation sufficient.

Dorking Cock Dying Suddenly (*J. E. M.*).—It died of a blood-vessel ruptured on the brain.

Brahma Pullet Moping (*C. R. M.*).—We should think the pullet is suffering from overfeeding. Three daily meals are ample. First, meal mixed with water; next, kitchen scraps or maize; evening, meal again. We advise you, if she is alive when this reaches you, to give a good dose, a full tablespoonful of castor oil. Feed sparingly with warm gruel, and repeat the oil after twelve hours. She is, we should think, suffering from fat, and she will not be better till she has got rid of it. You must not imagine we are wrong if when you take up the bird you find the breastbone comparatively sharp, and the body dry and thin. It will only be an additional proof it is suffering from internal fat, which impedes the action of every organ, and will certainly cause death unless it is got rid of.

Hen-coop (*P. C.*).—The door is formed by the four centre bars of the front, which slide-up as in most other coops. The tray at bottom does not slide out, but the coop is placed over it. No doubt the tray could be made to slide-out at the back, but it would soon get out of order, and would be liable to catch the chickens' legs when being drawn-out. It can be readily cleaned from the front without removing the hen. (*E. J. P.*).—The one Mr. Lingwood employs is not manufactured by anyone for sale. Any carpenter could make one if shown the drawing and the dimensions which we have published. (*Several Correspondents*).—Price about 14*s.* each; but it would of course depend on the carpenter if he charged less for six. Any carpenter could make them from the drawing.—T. C. Burnell.

Blood in Eggs (*Filex*).—We think your birds are overfed, and are suffering from internal fat. We should reduce their allowance of food, especially any heating or artificial part of it, and bring them to a simple meal and crushed corn diet.

Rabbit Management (*Pro Bono Publico*).—Sawdust does no harm on the bottom of a Rabbit-hutch. Does kept in a healthy state and well supplied with green food, and with water two or three times per day, will not eat their young. Feed your doe well, and do not let her have more than four or five young to rear. They will fatten from the teat. Kill those you do not intend to rear at six weeks old, and you will say they are second only to a prime chicken. The buck is probably injured. If it were not hard as bone, it would be probably a cheesy tumour. It could be removed, but it would come again. The first point of a Flemish giant is size. They should have heavy dewlaps and lop-ears. They cannot be too heavy.

Bees Dying after Cold Weather (*W. P.*).—It is quite impossible, without further knowledge of the circumstances of your hives, to do more than guess at the reason of the death of so many bees out of two of your hives, or of the total loss of the other. During a prolonged frost there is sure to be a great accumulation of dead bees in the hives, and yet the mortality is probably not much greater than takes place under other circumstances, only in mild open weather bees carry out their dead continuously from day to day. Of course, when they cannot move out, the corpses drop down and lie in heaps below till the weather is mild enough to allow the bees to carry them away. We should hope from the fact that those dead were outside the hives, that these stocks will be found all right by-and-by. As for the third stock, they must have been in a poor way before the frost; but what may have been the cause of their ruin we cannot tell, unless it be that their queen had failed them in the early autumn. We should advise you carefully to put by this stock in some dry and cool place out of reach of the bees till you have an early swarm to put into it.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. Feb.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 10	30.192	33.1	33.1	N.E.	36.0	34.2	29.3	35.8	30.7	—
Th. 11	30.181	32.7	32.6	W.	35.7	37.4	30.4	45.2	29.7	0.362
Fri. 12	29.868	42.1	42.0	S.W.	36.0	45.8	32.1	47.8	30.9	0.015
Sat. 13	30.054	39.0	38.3	S.	38.0	44.6	37.7	48.6	37.7	0.040
Sun. 14	30.040	48.2	46.9	S.S.W.	38.2	51.2	38.5	56.1	38.2	0.062
Mo. 15	30.259	41.7	40.2	N.	40.8	50.7	37.0	59.2	31.2	—
Tu. 16	30.496	36.2	36.0	W.S.W.	40.0	47.2	34.4	51.8	30.2	0.010
Means	30.156	39.0	38.4		37.8	44.4	34.2	57.3	32.7	0.487

REMARKS.

10th.—Fair, though not bright morning, the day of the same character. A very slight fall of fine snow about 5 P.M.

11th.—Dry but rather dull all the day; snow and rain after 9 P.M.

12th.—Very wet morning; damp disagreeable day; finer at night.

13th.—Very dark and damp all day, sometimes raining heavily, but only for a time; not fine at any time.

14th.—Damp but fine-looking in the morning; rain before noon, and it fell more or less nearly all the remainder of the day.

15th.—A most beautifully bright day and night; bright sun in the day and equally bright moon at night.

16th.—A very bright fine morning and forenoon, though preceded by a white frost and very slight fog; the after part of the day rather less fine. Rather windy at night.

Much warmer than last week, but almost sunless until Monday, when it was very powerful.—G. J. Symons.

COVENT GARDEN MARKET.—February 17.

There is so little change here, it is not worth notice.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	0	0	to 0	0	Mulberries ℔ lb.	0	0	to 0	0
Apricots doz.	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries ℔ lb.	0	0	0	0	Oranges ℔ 100	8	0	12	0
Chestnuts bushel	10	0	20	0	Peaches doz.	2	0	3	0
Currants ½ sieve	0	0	0	0	Pears, kitchen doz.	2	0	4	0
Black do.	0	0	0	0	dessert doz.	2	0	4	0
Figs doz.	0	0	0	0	Pine Apples lb.	2	0	4	0
Filberts lb.	1	0	1	6	Plums ½ sieve	0	0	0	0
Cobs lb.	1	6	2	0	Quinces doz.	0	0	0	0
Gooseberries quart	0	0	0	0	Raspberries lb.	0	0	0	0
Grapes, hothouse lb.	6	0	10	0	Strawberries ℔ lb.	0	0	0	0
Lemons ℔ 100	8	0	13	0	Walnuts bushel	8	0	12	0
Melons each	0	0	0	0	ditto ℔ 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes doz.	3	0	to 3	0	Leeks	0	3	to 0	0
Asparagus ℔ 100	6	0	10	0	Lettuce doz.	1	0	2	0
French per bundle	0	0	0	0	Mushrooms pottle	0	9	2	0
Beans, Kidney per 10	2	0	3	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	0	0	0	0	Onions bushel	3	0	5	0
Beet, Red doz.	1	0	3	0	pickling quart	0	6	0	0
Broccoli bundle	0	9	1	6	Parsley per doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	3	0	4	0	Parsnips doz.	0	9	1	0
Cabbage doz.	1	8	2	8	Peas quart	0	0	0	0
Carrots bunch	0	6	0	8	Potatoes bushel	2	6	6	0
Capsicums ℔ 100	0	0	0	0	Kidney do.	3	3	6	3
Cauliflower doz.	4	0	8	0	Radishes doz. bunches	1	0	1	0
Celery bundle	1	6	2	0	Rhubarb bundle	1	0	1	6
Coleworts doz. bunches	4	0	6	0	Salsafy bundle	1	3	0	0
Cucumbers each	2	0	3	0	Scorzonera bundle	1	0	0	0
pickling doz.	0	0	0	0	Sea-kale basket	2	0	3	6
Endive doz.	2	0	0	0	Shallots lb.	0	3	0	6
Fennel bunch	0	3	0	0	Spinach bushel	0	0	4	0
Garlic lb.	0	6	0	0	Tomatoes doz.	0	0	0	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish bundle	0	0	4	0	Vegetable Marrows doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	FEB. 25—MARCH 3, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m.	h.	Sun Sets. m.	h.	Moon Rises. m.	h	Moon Sets. m.	h.	Moon's Age. Days.	Clock before Sun. m.	s.	Day of Year.
25	Th	Royal Society at 8.30 P.M.	47.7	32.7	40.2	56 af	6	31 af	5	42af	11	28af	8	19	13	17	56
26	F	Royal Institution at 8 P.M.	47.2	33.6	40.4	54	6	32	5	morn.		41	8	20	13	6	57
27	S	Royal Botanic Society, 3.45 P.M.	47.7	33.5	40.6	51	6	34	5	55	0	59	8	21	12	50	58
28	Sun	S SUNDAY IN LENT.	49.1	32.8	40.9	49	6	36	5	9	2	23	9	(	12	45	59
1	M	Entomological Society at 7 P.M.	47.4	33.6	40.5	47	6	38	5	19	3	57	9	23	12	33	60
2	Tu	Zoological Society at 4 P.M.	48.7	34.7	41.7	45	6	39	5	21	4	45	10	24	12	21	61
3	W	Royal Horticultural Society, Fruit and Floral Committees at 11 A.M.	49.9	32.8	41.0	43	6	41	5	11	5	48	11	25	12	8	62

From observations taken near London during forty-three years, the average day temperature of the week is 48.7°; and its night temperature 33.7°.

THE PREPARATION OF SOIL FOR POTTING PURPOSES.

A FAIR amount of success, in a quiet way, in cultivating plants usually found in a gentleman's garden enables me to speak practically on the matter of soil-preparation. Too often—in fact it is the case generally—the practice is to bring to the bench the different soils required and mix them at the time of potting. I do not submit that by this plan good plants have not been grown, for the best of all reasons—that I have so grown them; but this very fact enables me to speak more forcibly of the advantages of mixing the soil some months previous to the busy potting season. By this practice I have always found the saving of labour considerable, and that a great amount of potting could be done much more satisfactorily and expeditiously than when I had to add to it at the time the trouble of mixing the soil.

At that busy period every moment is precious, and plants, mayhap, are suffering injury for the want of potting when an opportunity can scarcely be found for the work. That is every year the case with hundreds of gardeners, who have more duties to perform than time and means to perform them. All such will find the previous mixing in a large heap of the soil for the season an aid and assistance throughout the year. The present is a very good time to accomplish this work. My own practice for some years has been to find a day or days for soil-mixing as soon as the work of winter digging has been completed. This has generally happened in February, when dry sunny days have come which enable the work to be better performed.

But it is not only as a saving of time that the work of previous soil-mixing is recommended, but it is because, as a rule, the plants themselves will flourish more satisfactorily. I cannot exactly say why that should be so, but many years of experience have proved the fact to my own satisfaction. I have mentioned fine weather as a desirable concomitant for doing this work. This is very essential, in fact it is absolutely necessary. In damp muggy days the soil goes together wet and clammy, and when such is the case it can never turn out for use in a free, clean, healthy state. If possible it should be put together in a state somewhat drier than would be desirable for immediate use, as in that case it embodies an infinitely greater amount of air which is so essential to its sweetness, and it is certain, as the washerwomen say, to "give again," and turn out several degrees more moist than when it was put together. That is a very important point to be attended to in doing the work well. Then there is the other side of the question—when mixed it must be sheltered from excessive wet.

In all places where a great amount of potting must be carried out a soil shed is a very necessary convenience. This generally-forgotten structure should never be overlooked in planning the arrangement for the satisfactory performance of this primary branch of a gardener's duties. Where this permanent roof for soil-shelter is not afforded, an artificial covering must be provided. I have found nothing better for this purpose than newly pared turves. These, if taken from the roadside or pasture ground, and cut 2 inches in thickness and a foot or more square, as is most convenient, form an effectual covering for mixed soil, protecting it alike from extreme wet and the drying effects of excessive heat. In a word, if put together in the right condition it will always be in good order for immediate use by this plain turf covering. My plan is to place the turf grass downwards, beginning at the bottom of the heap, and let each surrounding layer overlap the layer below, after the manner of slating a building. The turf, too, after it has served its purpose as a protector, is then ready for another purpose. By exposure to the sun of summer and the frost of winter it is thoroughly aërated and perfectly sweet, and on being knocked into pieces forms the base of a future heap of soil to be again covered by a further supply of fresh turves.

But all have not turf for covering, and the next best material is straw. Give the heaps a very sharp angle, and thatch the same as a corn stack, and the soil is as safe beneath the covering as the corn. It is, moreover, quite neat in appearance when carefully done. The protection of soil for potting purposes is of more importance than is by some imagined, and hence it is adverted to as a point of practice which should not be neglected.

Now, it may be surmised that a heap of soil cannot be mixed which will be adaptable to all plants. That would be a very natural supposition, but is destitute of force sufficient to detract from the real usefulness of the work in question. Most people have at some time or other noticed the routine of a public dispensary, or the surgery of some eminent surgeon, and have no doubt seen the one huge bottle from which nine-tenths of the applicants are supplied as the bulk and basis of their several mixtures. Precisely on this principle the ready-mixed soil store is recommended: it is provided as the foundation of what is required for everyday use.

Now the prevailing nature of this want is loam. Add to that, if it is not rich, one-third of old pulverised manure, one-sixth of lumpy charcoal if it can be had, one-fourth of sharp sand, more or less as the strong or light nature of the loam will suggest, and one-twelfth of soot. Mix that thoroughly, and in a few months, and until the store is exhausted, there is no lack of soil for all the ordinary softwooded plant-growing purposes of the garden. A boy can be sent with a basket or a man with a barrow, and there is no uncertainty as to what either may bring. If the mixture is too heavy, as for Primulas, it is easy to make it lighter; and if not sufficiently rich, as for Chrysanthemums, it is easy to make the necessary additions. These, with Pelargoniums, Fuchsias, Cinerarias, Calceolarias, all sorts of greenhouse annuals, and numberless other plants, will grow to perfection in soil from this one great prepared and protected store. It will be found in every respect infinitely preferable to mixing the soil on the day of potting, which takes up valuable time, and is

not so good for its purpose as when previously mixed and incorporated. For young plants peat and leaf mould can be added at the time if it is required, but it is not at all necessary that it be mixed in the heap for using in the large quantities which a general collection of established plants need.

It has long been my practice at this season of the year to set apart a portion of time for soil-mixing, and I cannot, as the year rolls round, look back with greater satisfaction to any other work or preparations that I may have effected. It is work of which I have felt the benefits during every week, and often every day in the week, of the whole summer. I do not hesitate to advise all who have not done so to set about a similar mixing of potting soil at the first convenient opportunity, being confident they will find the advantages of the plan to be great, and possibly of more value than they can at the present moment appreciate.

Many plant-lovers, and especially amateurs situated in the vicinity of towns, experience considerable difficulty in procuring a supply of soil suited to their wants. They read about turfy loam, roadside trimmings, and hedge-bottom parings, which only makes them feel their wants the more keenly as none of this coveted soil is within their reach. With those who have means the difficulty vanishes—indeed there is no difficulty, as they can purchase all they want; but many another cannot do this, yet cherish their friends, the plants of their dwellings, and know not what to procure for their sustenance. Such must turn to the flaky surface soil of any ordinary garden or field. This the frost has purified, and the dry winds of spring have drained of its moisture, and it is in a condition to grow most ordinary plants well. This soil collected when dry—scraped off the surface just as deep and no deeper than the frost has penetrated—is the best substitute for turfy loam that can be recommended. Broken bones and oyster shells will keep it porous and afford a long-wearing stimulant; and when the plants are in active growth and the pots are filled with roots, and yet a further push is necessary, a thimbleful of guano sprinkled on the surface of a 6-inch pot and watered-in, will add a richer hue of health to the foliage and give substance and colour to the flowers. This repeated once a-week will do much to compensate for any original poverty of soil, and will show that a plant can after all be assisted to grow and afford pleasure without the assistance of the gardener's sheet anchor—turfy loam.

These notes—the outcome of actual practice in town and country, where soil was plentiful and where it was scarce—are commended to gardeners and amateurs at a period of the year when the detail of practice may be useful to both.—A Practical Gardener.

A SELECTION OF VEGETABLES FOR EARLY SOWING.

Those having the use of a hotbed for Cucumbers, &c., at this time of the year will have no difficulty in finding enough to fill up the spare corners with if they look over their seed packets. By a judicious selection of varieties, and sowing at the proper time, the season of many useful vegetables may be considerably lengthened.

Brussels Sprouts can scarcely be sown too early. I have more than once found that those sown on a hotbed in February lasted quite as late in the following spring as those sown in April, and they commence bearing much earlier. They are never too early; Brussels Sprouts are always in season if they can be procured. They must be pricked out under handlights or some kind of shelter before they commence to get drawn, or they will be useless. I have not found anything better than the imported seed as supplied by our principal seedsmen. It is of the greatest importance to have seed of a good stock.

Early London Cauliflower well repays for treatment similar to the above. If sown early and pricked out on a little bottom heat, the plants will be very little behind those sown in autumn and protected through winter, and will be far less trouble and probably of better quality.

Bath Cos and Tom Thumb Cabbage Lettuce sown now, and pricked out under glass, will be fit for use in May, before the autumn-planted ones are scarcely over. The Cabbage varieties turn in quicker than Cos, and Tom Thumb is the earliest amongst them and one of the hardiest. Why does everybody recommend White Paris Cos and its varieties for summer? They are not equal in quality to the Green Paris Cos when well blanched.

Red Cabbage sown in a frame in spring is much better than when sown in autumn, the heads being smaller, and consequently there is less waste.

Veitch's Autumn Giant Cauliflower is a splendid vegetable for autumn, but during the last two seasons, and especially the last, I have found it of the greatest service in August. It was sown in a frame in February and planted out early, and when the dry weather came at midsummer Autumn Giant had fast hold of the subsoil, and the hot weather exactly suited it. Walcheren, on the other hand, just planted, could not even exist. No amount of watering at the root would save it; the parched atmosphere quickly dried up its tiny leaves almost as completely as if they had been in an oven. Could they have been potted and protected for a few days before planting-out they might have succeeded; but there was quite enough to do in most gardens last midsummer without potting Cauliflowers.

Tomatoes cannot be sown too early. I sow in January in heat for the principal summer crop. If afterwards checked it will not harm them, provided they are kept clear of insects. The earliest variety is Orangefield Dwarf Prolific, and the best is Hathaway's Excelsior.

Early Celery.—I find the best is Sandringham White; but no white variety in my opinion can compare with a good red, such as Major Clarke's or Leicester Red, for quality. The first week in April is the time I sow my main crop of Celery; it is then ready to go out quite as soon as the weather is fit for it, and it never receives a check.

Scarlet Runner Beans.—By a little scheming I have been able to gather these out of doors for two or three seasons by the first week in July—once even by midsummer day. The Beans are sown three in an 8-inch pot in April and kept under glass; after they have made three or four rough leaves they are pinched back, and kept continually pinched at every joint as fast as they make growth till a little before the time of planting-out in June, when they are more in the shape of Gooseberry bushes than ordinary Scarlet Runners. They have stakes placed for them to run up; but they never grow so strong as later-sown ones, and they are in full bearing in a very short time after planting. I have them much earlier than I have ever been able to produce Dwarf French Beans outside, for which in my opinion they are more than a substitute.

Early Carrots.—Those who have to produce these cannot do better than stick to the Dutch Forcing, or French Forcing I believe it is now called.

Peas.—For those who want quality I have not yet seen anything so good as Little Gem. If grown near to a south wall it comes into use as quickly as the earliest of the round varieties, for these being taller cannot be grown in such a position without injuring the occupants of the wall.

Potatoes will scarcely come in under the above heading; nevertheless, I wish to say that the old Ashleaf is still the earliest good Potato. Royal Ashleaf and Veitch's Improved Ashleaf are of better quality and much more productive than the old favourite, but they are not so early by a fortnight, and they are stronger growers.—W. Taylor.

DEUTZIA GRACILIS AND ITS CULTURE.

What is there amongst our early-flowering plants more useful or more graceful than the Deutzia gracilis, with its stems covered with snow-white blossom? It is excellent for bouquets, and most enlivening amongst the green-foliaged plants in the conservatory. It ought to be more grown than it is. No plant can be more simple to manage. To keep up a succession of bloom from Christmas to the end of February pot early in November three dozen young plants in clean well-drained pots; for soil using two parts loam, one of leaf mould, and a little rotten stable manure and sand. Place them on ashes in a cold pit or frame; give plenty of air, but do not water them for a week after they are potted, as the soil turns cold and wet, and afterwards sour. About the beginning of December take one dozen of them into a temperature of 60° to flower at Christmas. In the middle of the same month bring in a second dozen to flower through January, and in this month bring in the last dozen to flower through February. When they have done flowering place them on ashes in an open situation outdoors to grow and ripen their wood, keeping them well watered, and when the plants become too large divide them.—W. Dongson, *Metchley House Gardens*.

Growing Hyacinths in Moss.—I have in the greenhouse an ornamental wire basket, in which I put six Hyacinth bulbs on 2nd January last, and to see them now I think you would say

that is surely the place to grow them. The bulbs have produced beautiful spikes of flower and splendid large green leaves, while the roots have made their way through the moss at least 3 inches, and which cannot be less than 10 inches from the bulbs. Evidently they are now receiving support from the moisture of the house. Now, I think this basket filled in this manner would do very well for hanging in rooms, with a few small Ferns planted inside of the rim, which is circular, to hang over, and a glass saucer or other kind suspended under the basket to hold the water, and which would at the same time supply the roots with moisture.—WILLIAM LAURIE, *Gardener, Lynnwood.*

NOTES RELATIVE TO THE POTATO.

IN the olden times before the discovery of the art of printing, to be able to read and write—a scholar in fact—was to be subject to suspicion and contempt—suspicion of dark dealings with those mysterious powers which dwell in the cloud that always envelopes dull ignorance. But while we smile at such folly it should not be forgotten that we too are not altogether without our failings—failings which lead to the adoption of theories that are unsound, and pursuits which often prove vain. One such, and in the pursuit of which considerable ardour has been manifested, is a blight-proof Potato, another is a cure for the Potato blight, both of which are perfectly unattainable, as was clearly set forth in the Journal about a year ago.

The futility of the trials of so-called blight-proof Potatoes which were then about to be undertaken under the auspices of the Royal Agricultural Society was strongly insisted upon; the result of those trials fully demonstrated the truth of assertions not lightly made, and based upon close observation and sound practical experience. The search for a blight-proof Potato has been abandoned, but researches are still going on which can answer no practical purpose, and can only serve to throw some light upon the action of certain natural phenomena, which, however interesting to philosophic minds, is a matter altogether wide of the important question, How shall we obtain a full crop of sound Potatoes?

That the Potato disease is caused by excessive moisture in the soil, or to put it more plainly, by the showers that generally occur sooner or later after the growth of the tubers has ceased and the process of ripening begins, is an incontrovertible fact long ago recognised by practical men. In many instances this knowledge has induced those who were able to grasp its full significance to strive to bring the crop into a suitable condition for lifting before the recurrence of the evil. Why a measure so simple in itself and so thoroughly efficacious has not sooner obtained a full and general adoption is owing, I think, to ignorance of the nature of the Potato itself.

Now, a Potato tuber possesses such astonishing vitality that it will not only make a strong growth, but will also yield young tubers, very small it must be granted, but of perfect form and with the organs of reproduction perfectly developed without any extraneous assistance other than is afforded by atmospheric moisture. This fact is undoubtedly of little value in itself, but is sufficiently remarkable to lead one to inquire if the economy of the Potato was capable of nothing more than this, for the phenomenon which I have described is in reality precisely similar to that which takes place in a living plant. For example, a Grape Vine will produce strong shoots clothed with foliage and bearing incipient fruit bunches entirely from stored up sap without any assistance from its roots. Nor does the analogy cease here, for both Potato and Grape Vine fail to make further progress without the assistance of new roots fed by a nutritious soil.

By careful examination it was found that immediately after a tuber had ceased to grow it might be separated from the haulm, without any interference with the process of ripening or deterioration in quality. The only blemish is in the somewhat unsightly and ragged appearance of the skin, which becomes broken from contact with others when taken up in its immature condition.

The action of Nature to remedy this rubbing of the skin is wonderfully prompt, a fresh skin of considerable thickness being formed within twenty-four hours after the storing of the Potatoes. Here is a question involving other questions for physiologists. One can understand something of how a ripening process can take place by oxidation, and by the combination of crude matter to form the starch or mealy substance so much appreciated in a good Potato after the tubers are taken up, just as of Apples and Pears after they are gathered form sugar.

It has been well said that "Nature knows no limits in her great laboratory, having combinations to play upon such as we are only just beginning to understand," and I should be glad to know more of her action in this instance. How is the second skin formed? Of course the substance is derived from the juices of the tuber: am I to suppose, then, that the juice which flows from the wound becomes hardened and converted into a substance resembling the skin by the action of the air? Or is there circulation, or rather a movement of its juices among its tissues, taking place after it is separated from the haulm? It may be said that the fact of the subsequent ripening process would imply something of the kind. Ripening, however, is simply one, or a series of chemical changes. Many fruits ripen after they are gathered, but if the skin sustains any damage decay invariably follows.

There are one or two other matters connected with this part of the subject concerning which I am somewhat in the dark, and which I will also propound in the form of questions, in the hope that those who possess the advantage of greater experience or ability may be able to enlighten me. The first question which I will ask is this—Is the blight infectious? That is to say, if we put a diseased tuber among others that are sound are they likely to become affected? Judging from my own experience I should certainly answer, Yes.

Then, if a crop is taken-up in showery weather and stored in a somewhat damp condition, are the tubers more liable to suffer from blight after they are stored than if they had had the advantage of a dry sunny day; or are they at all susceptible of blight after the storing? Here again I am constrained to answer, Yes. But then there remains an impression that those tubers which apparently have failed from either of such causes had in reality become tainted before they were separated from the haulm, and if so all subsequent care would be quite useless.

These matters are, I think, of the very greatest importance. Believing as I do that the blight is incurable, and that it is only to be met successfully by timely culture and by taking-up and storing the crop while it is sound, anything affecting the measures taken to that end for good or evil merits the closest inquiry and attention.

An inquiry into the history of the Potato and its culture reveals the fact that our knowledge of the subject is very little in advance of what was known forty years ago. New and improved sorts were then sought after with an avidity quite equal to that of the present time; nor was there less ability and intelligence displayed in the raising of new kinds from seed, the necessity for doing so being understood as perfectly then as now. A writer in the "Quarterly Journal of Agriculture," in stating his reasons for raising seedling Potatoes in 1833, says—"The Potato, in common with all other cultivated productions of the vegetable world, has a tendency to degenerate in proportion as the means to prevent its doing so have been neglected. Nature, however, has provided for the permanent health as well as the productiveness of her offspring in the seed contained in the berry which the plant produces from its stalks." In little more than another decade—that is to say in 1846, the year of the great blight, we find that the evil of excessive moisture and heavy retentive soil were as clearly understood as they are now. In an interesting account of the blight and its effects in the seventh volume of Allison's "History of Europe," it is stated that "the disease was much more violent in the western parts of Great Britain than in the eastern, and in rich and highly cultivated localities than in those more recently brought into cultivation, or where the soil was poor. From Aberdeen to Inverness, where the soil was in general sandy or gravelly and a great part of it had been newly brought into cultivation, the disease was unknown; but in the west Highlands, abreast of this district, it was all but universal, and had almost totally destroyed the crops." This statement will be doubly significant to those who are aware of the considerable excess of the rainfall in the western districts to that in the eastern.

In giving this quotation from Allison I do not, of course, intend to infer that a poor soil is at all preferable to a rich one for Potato culture; that would be simply absurd. The rich alluvial soil in the neighbourhood of Peterborough and Wisbeach is most wisely devoted to the growth of Potatoes, because it is in that district that the rainfall sinks to a minimum, and the natural conditions are therefore precisely those

which experience shows to be most advantageous to its culture. There is a similar deposit of soil on the west coast, in the neighbourhood of Southport and Blackpool, but it is very certain that the excessive rainfall renders it an unsuitable district for extensive Potato culture.—Edward Luckhurst.

THE CULTURE OF THE CHINESE PRIMULA.

Being requested to communicate my mode of culture of this indispensable winter-flowering plant, I with some hesitation comply, feeling as I do less confidence in writing about the plant than growing it. My plants, which commence to flower in the autumn and continue all through the winter months, are produced as follows:—

In order to have strong blooming plants early the seed should be sown not later than the second week in April. I procure a clean seed pan and drain it well, and fill with light sandy soil. The surface is made very level by the gentle pressure of a smooth piece of wood. This is watered, and a few hours after the seed is sown thinly and covered very slightly indeed with the finest of soil. The seed pan is then covered with a square of glass and placed in a gentle bottom heat. The soil is not watered for a few days, or until the surface shows signs of becoming dry, and then the greatest care is exercised, and water fully as warm as the soil is given. The moment the seedlings appear the pan is brought close to the glass, and the glass covering is propped up very slightly, to be increased by degrees until totally dispensed with. As soon as the seedlings can be handled they are pricked out in pans of leaf mould and silver sand 1½ inch apart.

When the plants grow and touch each other they are potted singly in 3-inch pots, and are kept growing in a genial temperature. When these pots are filled with roots, yet before becoming pot-bound, the plants are shifted into 6-inch pots; these are the blooming pots. The soil for this final shifting is composed of good leaf mould three parts and thoroughly decayed manure one part, to be well mixed with sharp sand. I use no loam, finding the plants flourish much better without it. The plants are still grown in gentle heat until they become established, and by that time the temperature will permit their removal to a cool pit or frame.

In the summer months they require abundance of air, and are the better for a little shade in bright weather. It is a good plan to remove the lights entirely on clear nights in summer for the benefit of the dews, which are very refreshing. Throughout the season they are watered with great care, and excessive moisture avoided. By this treatment splendid plants are obtained, which will be a mass of bloom in November and continue so for six months.

I never pinch out the first flower buds, which is a common but mistaken practice; it is the first and prime source of decay, which often becomes virulent and causes the death of many plants when just reaching perfection. By never pinching out the first blooms I am seldom or never troubled with this common annoyance or disease.

If sown earlier than the time named the plants are apt to be coddled and be made tender unless plenty of house room is provided, which is not always the case with those who grow Primulas. My advice, therefore, is not to sow until towards the end of April, and by the time the plants become large and take up much room the cool frames are ready to receive them; the natural temperature will then permit of their removal without any check, which at all times is most prejudicial.

Very early sowing to gain time is often a sure way to lose it, on account of succeeding checks the plants receive, and which cannot easily be avoided. By somewhat later sowing the plants have a better opportunity to grow without hindrance, when they will quickly make up for a few weeks in spring, which are seemingly lost, but not really so, as they are more than regained in the end by the healthy vigour of well-constitutioned plants with sturdy foliage and massive trusses of bloom.—J. Christie.

Acres of Orchards, Nurseries, and Market Gardens.—In 1874 the land returned as used also for orchards was 145,622 acres in England, 2994 in Wales, and 1910 in Scotland. The separate returns for land used by market gardeners for the growth of vegetables and other garden produce show in 1874 an acreage of 34,689 for England, 477 for Wales, and 2741 for Scotland. An increased demand for fruit and vegetables is stated by some of the collecting officers to have led to the extension of orchards and market gardens in the neighbourhood of towns. For land used by nurserymen for the growth of trees, shrubs, &c., the returns for 1874 show an acreage of 9245 for England, 630 for Wales, and 1868 for Scotland.

GRAPES.

As the planting season will soon be at hand for the above, I would like to mention three sorts which I find receive but scant favour with some. Mrs. Pince is with me a very fine Grape, and grows large bunches and colours well; the flavour, too, is excellent. I think the main cause why many do not succeed with it is that they do not give air enough to it. The next is a most delicious Grape, though according to gardeners' notions a bad colour, being a reddish purple; it is large in berry, thin in skin, and carries a light bloom—I refer to the Muscat Champion. The third is the Madresfield Court Muscat, smaller than the foregoing, but a really good variety, and is hardy, ripening without heat, and colouring beautifully. I shall plant three more of this. I have pulled up all my Lady Downes' in favour of Mrs. Pince, which I think far superior. —Harrison Weir, *Weirleigh*.

A VISIT TO MESSRS. VEITCH & SONS' NURSERY, CHELSEA.

This is a right royal establishment in the world of horticulture; replete with home plants of every class and for every purpose, and rich in many rare plants of other lands, it is at all times capable of affording interest to the visitor. For the information of those who may have not yet seen this celebrated nursery it may be described as a town of glass, having its streets, alleys, by-paths, and squares, conveniently arranged for the well-being and comfort of its inhabitants, both of the floral kingdom and also for the world of humanity. To attempt to enumerate the glass structures would be superfluous, while to describe the contents of each would, considering the space at our disposal, be a sheer impossibility. We therefore confine our notes to a few examples which were the most striking on the day of our visit, beginning with the

Camellias.—The principal collection of these is arranged in broad borders along each side of a lofty glass structure about 100 feet in length. The path between this avenue of Camellias is broad and well suited for promenade, which is in fact a walk of great beauty at the present time. The largest plants are planted-out and established in a soil of peat and loam, the latter apparently predominating. They are in excellent health, with bright wood and glossy foliage, free alike from dust and insects, yet covered with their thousands of beautiful blooms. Many of these plants are from 8 to 10 feet in height and 6 to 8 feet through, well furnished from the ground, growing as freely as Laurels, and blooming as profusely as Roses. There are also some excellently-grown specimens in tubs, and smaller but equally healthy plants in pots.

The largest-sized bushes consist of the oldest varieties, and many of these, it must be conceded, are not surpassed in quality and effect by newer introductions. The old Alba plena, for instance, is still one of the best, if not altogether so, of the double pure white varieties. The specimens of this fine old sort are very telling. A fine plant is also seen of Fimbriata, with its beautifully serrated petals. In its way this long-established favourite has still no equal. Amongst the reds Imbricata still holds its own by its easy growth, free-flowering property, and good quality of its marbled blooms. Mathotiana is not yet surpassed by its velvety richness; while the single kinds, as Donckelarii, Conspicua, Tricolor, &c., are still as showy as ever, and such sorts as Marchioness of Exeter, Cup of Beauty, and Countess of Orkney will continue to be good when many of their followers, newer varieties, may be heard of no more. The individual blooms of new kinds may be, and undoubtedly are, beautiful, but some of them are of straggling habit, others of weakly growth, and some are shy in blooming, which detracts from their general value.

The few varieties we will now enumerate as amongst the best seen in flower may be relied on as possessing general excellence. Beginning with the whites we make bold to head this list with Alba plena, seconded by Fimbriata. Ochroleuca is a white-flowered of fine build, but old blooms occasionally show a yellow eye. Mrs. Cope is a chaste and refined flower, and the plant of compact habit; Jenny Lind is a perfect bloom, mostly of the purest white, smooth, and of fine sub-

stance, yet occasionally a touch of pink breaks out of the petals: this is a variety of sterling merit, habit, foliage, and blooms being alike good. Jubilee (there is also a continental red one of this name) is attractive, its flowers being a blush white, and foliage very superior. Teutonia—white, delicately touched with pink—is a very excellent variety, while Countess of Orkney of the same type should be in every collection, as also should Cup of Beauty. Of more decided colouring on a white ground is Princess Frederick William of Prussia, which is carnation-striped and mottled, is of excellent habit, with the fine twisted foliage of Imbricata. Of even more decided markings is Comtesse Lavinia Maggi, a flower of stout build and very attractive, yet lacking the refinement of some other varieties.

The best of the darker-coloured kinds are Imbricata; Mathotiana; Leopold I., good colour, with shell-like petals and vigorous growth; Reine des Fleurs, compact, free, and of fine substance of petal; Jeffersonii, a high-coloured variety, and attractive by the white bar down the centre of each petal. Clio vera is a nice flower, of a bright pleasing colour. Reticulata plena is perhaps the richest of all, carrying blooms of great substance and good form. It is distinct in foliage from every other variety, and is of vigorous growth. This is suitable for a large specimen or for covering a wall.

The pink and rose-coloured varieties in bloom were not numerous. The best of these was Augustine superba: this appears identical with Succoi nova, which has a host of aliases, and is perhaps the best proof of its worth. Henri Faure is a good deep-coloured variety in this section, and the plant possesses a free growth. General Lafayette is a free-flowering kind, but its crimpled petals add nothing to its beauty. Last, but not least, is Comte Nesselrode: this is a comparatively new variety, and is undoubtedly good. These are the best of the collection seen in bloom, and all are worthy of general cultivation. Besides these large plants other houses are filled with Camellias, ranging from half-specimens down to handy plants in 4 and 5-inch pots. The entire collection is healthy and well grown. The next most striking feature in the establishment is the collection of

Nepenthes, or Pitcher Plants. These quaint flowers hang from the roofs of the houses like a cloud of gigantic spiders. They are grown in home-made baskets, such as are used for Orchids, and the pitchers are suspended over the sides in great profusion. The cleanliness and health of these plants are remarkable, and their interest to visitors is always very great. One of the most free and attractive kinds raised, we believe, in this establishment is N. intermedia. This is clearly a variety of great merit, and the stock is both large and good. We also noticed N. hybrida and hybrida maculata as distinct and fine; N. lausta of remarkable texture of foliage and pitchers; the well-known N. Rafflesiana, and the pretty N. Sedeni. A number of seedlings with miniature pitchers were very interesting, and gave promise of developing into new varieties of distinct and sterling merit. We would now briefly glance at the

Orchids, noting a few in bloom at the time of our visit. Of these were the varieties of Phalænopsis—grandiflora, amabilis, and the ever-charming Schilleriana. The young stock of these is very large, and as an instance of their free-blooming character we noted some throwing-up spikes while only in thumb pots. The curious Angræcum sesquipedale was in flower, also good plants of the useful Cœlogyne cristata were covered with blooms. Attractive spikes of tha free winter-blooming cool-house Orchid Odontoglossum Alexandræ were plentiful, and by way of contrast the richly-coloured O. triumphans showed to advantage, while O. pulchellum, so charming for cut blooms, had a profusion of spikes. Oncidiums were represented by cheirophorum, the richly-scented speciosum, and a newer one, splendidum, which was rightly named. This is really splendid, the sepals being yellow and brown, and the labellum of the richest, yet soft, orange. It is unquestionably one of the finest of the entire group, and may well close our notes on this interesting tribe of plants.

We observed in the Orchid house a blooming plant of the beautiful Bromeliad Tillandsia Lindeni. The flowers of this variety are of the richest and purest blue imaginable; they are of large size, borne on a spike about 18 inches in height. To just one other plant we would draw attention, altogether different in character to the preceding—viz., Boronia megastigma. This is a greenhouse plant, with foliage as small as that of the most delicate Heath, and from the axil of every leaf is a round bead-like flower, brown outside and yellow inside. The plant is literally studded with these globular miniature blooms, but these are not half its attraction, the chief interest of the plant being its remarkable perfume. We pause to examine the powerful yet familiar odour. Imagine a huge bunch of Cowslips freshly gathered from the pasture, and the breath of these much intensified, and we give a fair representation of the perfume of this curious and interesting plant. By just one specimen in a greenhouse or sitting room the vernal scent of the old meadow flower is provided in the depth of winter. On this account it is a plant which ought to become popular.

We can only say in conclusion that the stove plants, Ferns, Palms, &c., were extensive and good, the hardwooded collections healthy, the Cyclamens in quantity and quality not easy to be forgotten, and the whole establishment in good order and systematic keeping.

ERANTHIS HYEMALIS, OR WINTER ACONITE.

Mr. Robson has (page 93) seasonably drawn attention to this worthy spring gem, which studs the ground with its golden blossoms at the most dreary period of the year. This plant is almost akin to air and water—so common as to be almost overlooked, yet indispensable. Added to its innate beauty the Winter Aconite has a most accommodating nature, and, when once established, the best bit of advice in Mr. Robson's paper is that summed-up in the three words, "let it alone." It will flourish anywhere, and spread and cover almost any portion of any garden in town or country. It never looks so bright, however, as in the dark places of the earth, and if anyone has a spot whereon nothing else will grow, let him try the Winter Aconite. The best way to get a stock is to sow the seed as soon as it has ripened. It is best sown in drills in light soil in a shaded part of the garden, to be transplanted in showery weather where it is required to become established, and then—let it alone. As a shrubbery or woodland plant of diminutive growth it has no equal, and when seen covering the ground by the acre it is a perfect sea of gold. At Coleby Hall, near Lincoln, the plantations are one dense mass of this lowly plant, and are more cheerful and enlivening than can be imagined by those who have not seen it in quantity. It is worthy in all such places of being grown by the acre all over the land.—Ex-Visitor.

GROWING CARROTS FREE FROM THE MAGGOT.

To produce an abundance of this essential culinary root is an easy matter, but to produce such roots clean and free from the grub is a question which has baffled many of the best gardeners of the day. Being a great believer in the old adage that "nothing succeeds like success," I would, for the benefit of all whom it may concern, place on record a mode I have found to be highly satisfactory.

On the principle of beginning fair, I first make the frank acknowledgment that I am indebted to my cottager friends for the first inkling of my success in Carrot-growing. I have always taken great pleasure in examining the cottage gardens in my neighbourhood, and candidly admit that I have thereby gained not a little information in useful vegetable-culture. I have also on many occasions had the pleasure of judging their produce at local shows, and in doing so have been struck with the particularly fine Carrots their garden plots have produced.

On investigation I found these Carrots were invariably grown on the Onion beds of the preceding year. I determined to try the same plan, and immediately the Onions were cleared off trenched the ground deeply, giving it no manure whatever. But as soon as the trenching was done I gave the ground a good drenching of sheep dip, at the strength of 2 ozs. of dip to three gallons of water. This dose I repeated a fortnight before sowing the seed. The result is an excellent crop of Carrots, many of them (Altrincham) 2 feet in length, while those of my neighbours were a total failure. All the Carrots are quite bright and free from speck.

I communicate this, knowing the difficulty many gardeners experience in raising good crops of high-class Carrots. I may add that before adopting the plan I could scarcely raise a perfect root, one season the crop being an absolute failure, while now I have an abundance of fine Carrots, and that is my authority for recommending the mode.

But some may ask, "What is sheep dip?" I cannot say of what the liquid is composed, but it is used largely by farmers

for washing the sheep to rid them of the vermin, and I have no doubt that what kills vermin on sheep will also destroy any of the pests that affect the Carrot and other roots, and prevent much injury by underground maggots. Some of these compositions are marked "poisonous," and some "non-poisonous." The kind I use is non-poisonous. It is known by the name of McDonghall's sheep dip, and is sold by agents in all the principal towns of Britain. I believe it is inexpensive, and I have proved it is effective. I also know that others have tried it with the same good result as myself.—J. D.

ROYAL HORTICULTURAL SOCIETY.

I AM not going to fish in these very troubled waters, and by doing so expose myself to a midshipman's allowance—"more kicks than ha'pence;" the most appropriate thing about the concern being their "maze," out of which it requires more ingenuity than I possess to find my way. But I just wish to point out how a class of persons, without whose aid the Society could not stand one moment, has been treated—I mean exhibitors. We have now arrived at the end of the second month of the year, and yet not one penny of the prizes due to us for 1874 has been paid! And when one takes into account the expense to which many of us are put in vans, horses, men, &c., all of which we have to pay for at the time, it seems extraordinary for a great Society, which has the Queen as its patron and no end of titled people belonging to it, to act in this strange and unbusiness-like manner. Nor is this all: the Council (who must have known when they did it, or if they did not they ought not to be there) issued in the autumn a schedule for 1875, in which they advertise a series of shows, amongst them a Hyacinth Show. Now it is well known that exhibitors of this flower are not like those of many others; they have to purchase their bulbs every year, and I for a certainty know many who did so, with the sole idea of exhibiting at South Kensington, and yet here in February a notice is sent out that the Hyacinth Show is abandoned! I do not blame the Council for not having one—that is their business, but I do blame them that they should have ever announced one; it is trifling with exhibitors which will bring its own Nemesis. I know one of their largest exhibitors, not in this only, but in many things, who vows he will never send anything again, and I fancy this will be the case with many.

I see there are four shows abandoned, and this is so managed that, with the exception of the Carnation and Picotee, every florist's flower is cut out. Auriculas (for Auriculas on May 12th is a farce), Pinks, Pansies, Tulips, Dahlias, Gladiolus, and Hollyhocks are as completely shut-out from their schedule as if they never existed. Is it not possible that the Committee of the Metropolitan Floral Society can be induced to extend their operations? They have announced a liberal schedule for the first and three last flowers above named, but can they not occupy ground which now seems cleared away for them, and come out strongly as a Society that has a status of its own, hold its own exhibitions, and by a generous treatment of exhibitors give a stimulus to floriculture?—AN EXHIBITOR AT THE R. H. S.

LITTLE HEATH MELON.

As I see the above variety of Melon in so many seed catalogues highly enlogised, I think it but right to record my experience of it. I grew nice fine-netted and handsome fruit, and I must say that I felt "in high feather" regarding their beauty until I tasted them, when I found that a little piece of each was too much, both my gardener and myself agreeing that they were not only not nice but nasty. Hitherto I have grown Turner's Gem, Golden Queen, Queen Emma, and Beechwood; the difference between these and the above as regards flavour was indeed great. No more Little Heath Melon for—HARRISON WEIR, *Weirleigh*.

THE WEATHER AT NICE.

WE read a great deal in the papers of the cold weather prevailing all around us, and in the *Times* of Wednesday there was a letter from a correspondent at Naples, giving a very poor account of the weather in the south, and saying that there they had ice 1¼ inch in thickness. We therefore think this must be a peculiarly well-favoured place, for though once or twice the thermometer has been just down to the freezing point, and we have seen very thin ice, we have nothing like the severity described at other places. A comparison between the minimum and maximum temperature at Kew and Nice during the recent cold weather gave an average of 10° in favour of Nice. There has been snow both at Cannes and Mentone, but it has only been seen in the distance from this place.

The Sparmannia africana is still flourishing out of doors. Nice supplies a great quantity of flowers and vegetables not only to the surrounding districts, but also to Paris and other large cities. Magnificent bouquets are sent by railway to Royal and other parties for weddings and special occasions. Orange blossoms have been recently sent to England, and arrived in two days quite fresh for the marriage ceremony. The wild spring flowers are becoming numerous, including Anemones of various colours—cernua, coronaria, and hortensis. The showy Almond trees are now in full flower.—EDWARD COPLAND, *Nice, February 20th*.

OUR BORDER FLOWERS—PENTSTEMONS.

WE have to look far back in the past for the introduction of this, one of our choicest families of border flowers, for it was in 1753 that Pentstemon pubescens was introduced. They are a race of plants that present to us a variety of attractive features. Some are prostrate and some of upright habit; all are more or less brittle, and suffer much from being blown about by the wind if not secured. They are a very accommodating family, yet their diversity of habit requires for them different treatment. Great improvements have been made in this family since the introduction of Pentstemon gentianoides, which was carefully tended as a greenhouse plant. P. coccinea and alba were once looked on as wonderful additions to our gardens as summer bedding plants, and when pegged down and carefully stopped they continued long in bloom, and gave us much satisfaction.

The Pentstemon has now become quite a florist's flower, with long lists of varieties enumerated in catalogues. They are easily increased by seed or division, but the choicest of them are best raised by cuttings in the autumn. I have found them succeed well in the following manner: Take as many 6-inch pots as may be required, and drain them well; cover the drainage with half-rotten leaves or moss, then fill up the pots to within an inch of the top with sandy compost, finishing with an inch of pure sand. Insert the cuttings round the edge of the pot, and place in a rather shaded situation out of doors, but preferably under glass, and water sufficiently, yet not so as to cause them to damp-off. September is a good time to put in the cuttings, which strike freely, and make good plants for potting or planting-out in spring. They should be wintered in a frame quite safe from frost.

Some kinds are increased by division, which is best done after the blooming period. They are useful where cut flowers are in demand, and succeed in good loamy soil. They seed freely—indeed often sow themselves. These seedlings can be taken up and preserved if thought desirable, and by that means a new colour may be introduced; but to obtain good varieties the best flowers should be impregnated and carefully tended, and a reward will follow. I would suggest as advisable that prizes be offered for Pentstemons at our horticultural exhibitions.—VERITAS.

ONIONS ALL THE YEAR ROUND.

FOR the last ten or twelve years I have tried various sorts of Onions—Nuneham Park, White Spanish, and other varieties, and I think none so good as Sutton's Improved Reading. It is large in size, good shape, mild in flavour, and one of the best keeping Onions in cultivation—that is, if it is stored away properly. I tie them in wreaths and hang-up in a dry cool place. I have grown it for the last six years, and by properly drying before wreathing have had Reading Onions for the table until the autumn-sown ones have come in. Last spring two Onions were left on the strings, and to my great surprise I find that one has grown a green top only 1½ inch long, the other being quite sound. So I think its hanging so well from 1873 to 1875 is quite sufficient to prove it one of the best keeping Onions in cultivation, and I do not think that there is an Onion to equal it.—R. WALKER, *Waingroves, Derbyshire*.

PELARGONIUM SOCIETY.—The following new members since last list was published have joined the Society:—Mrs. Carter, Faversham; W. H. O. Sankey, M.D., Cheltenham; T. Kibble,

Tunbridge; H. G. Quilter, Aston, Birmingham; Miss Skipworth, Derby; James Veitch & Sons, Chelsea; F. Campion, Red Hill; J. F. West, Reigate.

DEVICES IN AUTUMN LEAVES.

An exquisite transparency may be made by arranging pressed Ferns, Grasses, and autumn leaves on a pane of window glass, laying another pane of the same size over it, and binding the edge with ribbon, leaving the group imprisoned between. Use gum tragacanth in putting on the binding. It is well to secure a narrow strip of paper under the ribbon. The binding should be gummed all around the edge of the first pane, and dried before the leaves, Ferns, &c., are arranged; then it can be neatly folded over the second pane without difficulty.

To form the loop for hanging the transparency, paste a binding of galloon along the edge, leaving a 2-inch loop free in the centre, afterwards to be pulled through a little slip in the final binding. These transparencies may either be hung before a window, or, if preferred, secured against a pane in the sash.

In halls a beautiful effect is produced in placing them against the side lights of the hall door. Where the side lights are each of only a single pane, it is well worth while to place a single transparency against each, filling up the entire space, thus affording ample scope for a free arrangement of Ferns, Grasses, and leaves, while the effect of the light passing through the rich autumnal colours is very fine. Leaves so arranged will preserve their beauty the entire winter.

An exceedingly pretty standing for a lamp can be formed of eight oblong transparencies (made of glass and autumn leaves as described) tacked together with strong sewing silk, so as to form an eight-sided hollow column. To hide the lamp candlestick the screen should be lined throughout with oiled tissue paper, either white or of a delicate rose colour.—(*American Horticulturist and Journal.*)

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

Epidendrum syringothyrsis. *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria.—"A very tall and handsome species, which flowered in Mr. Veitch's fine Orchid collection in May, 1868. It is a native of Bolivia, where it was collected in 1866 by Messrs. Veitch's collector, the late Mr. Pearce, and is evidently a member of the immense section to which E. evectum belongs, and of which the type is the long-known E. elongatum, *Jacq.*, which latter is one of the earliest cultivated tropical Orchids. From all its congeners that are known to me it differs in the great size of the dense-flowered raceme, which, from its general resemblance to that of the Lilac in form and colour, has suggested to Professor Reichenbach the specific name of syringothyrsis. Its nearest ally is E. porphyreum, *Lindl.*, a native of Peru, which has a panicled inflorescence."—(*Bot. Mag.*, *t.* 6145.)

Lilium canadense, *var.* parvum. *Nat. ord.*, Liliaceæ. *Linn.*, Hexandria Monogynia.—Colour of flowers orange and pale yellow. "The variety parvum inhabits a wide range of the mountains of Western America from British Columbia southwards, and appears to vary extraordinarily in stature and in the size of all its parts. Our specimen was sent from the fine collection of Messrs. Barr & Sugden, with whom it flowered in June of last year."—(*Ibid.*, *t.* 6146.)

Veronica pinguifolia. *Nat. ord.*, Scrophulariaceæ. *Linn.*, Diandria Monogynia.—Flowers white, with purple anthers. "The shrubby Veronicas of New Zealand are a prevailing feature throughout the islands at all elevations, and in almost all situations. Upwards of thirty species have been discovered, including some of remarkable beauty, of which V. speciosa and V. salicifolia, with their numerous varieties and hybrids, are the only ones well known in cultivation, except the less attractive V. elliptica, one of the earliest cultivated greenhouse shrubs of the southern hemisphere, and which inhabits New Zealand, Terra del Fuego, and the Falkland Islands. Amongst the least conspicuous of this group is the present plant, which is a native of considerable elevations (3000–5000 feet) in the Nelson and Canterbury provinces of Middle Island of New Zealand. V. pinguifolia has been cultivated for several years both at Kew and in Mr. Isaac Anderson-Henry's garden near Edinburgh, where it was first raised from seed. It has stood in the open air throughout the winter without protection at Kew, and flowers in midsummer."—(*Ibid.*, *t.* 6147.)

Fourcroya Selloa. *Nat. ord.*, Amaryllidaceæ. *Linn.*, Hexandria Monogynia.—Flowers white and green. "I am not aware that it has flowered anywhere but at Kew, where two individuals in the spring of last year sent up flowering scapes, which, pushing rapidly upwards, were allowed to protrude through the roof of the succulent house, and expanded in magnificent panicles in September. They continued flowering till November, and formed bulbils in the branches of the panicle as well as flowers. At the same time three other fine plants of the same class flowered in the same house, and required exit through the roof—namely, Agave americana and two specimens of Dasylirium acrotrichum. F. Selloa is a native of Guatemala, and has long been cultivated at Kew, where it was received from the continental gardens."—(*Ibid.*, *t.* 6148.)

Senecio macroglossus. *Nat. ord.*, Compositæ. *Linn.*, Syngenesia Superflua.—"A remarkably handsome plant, and one fitted for dwelling-room culture, its Ivy-like glossy leaves being evergreen, its large yellow flowers produced in midwinter, and its habit well adapted for a trelliswork. I have indeed heard of either this or an allied species being cultivated in drawing-rooms abroad, and trained round the walls beneath the ceiling. Like most Cape plants it wants very careful watering and plenty of fresh air. It is the largest-flowered species of the enormous genus to which it belongs, and which contains nearly one thousand species, and the flowers remain for a considerable period in perfection. According to the 'Flora Capensis' S. macroglossus extends from the Keiskamma river (west of Algoa Bay) to Natal, but the only specimen we have that precisely agrees with the cultivated plant was collected by Mr. Sanderson on the Palmiet river, immediately to the east of Table Bay in the Western Cape district.

"It is cultivated in the succulent house at Kew, where it is trained upon one of the rafters, and forms a very ornamental feature, blossoming at Christmas; it was raised from seed sent by Mr. Sanderson in 1868."—(*Ibid.*, *t.* 6149.

Erythrotis Beddomei. *Nat. ord.*, Commelyneæ. *Linn.*, Hexandria Monogynia.—Flowers deep crimson. "A singularly beautiful little plant, and one easy of cultivation, discovered by Col. Beddome, F.L.S., on dry bare rocks, at an elevation of 3–4000 feet, in the Myhendra mountains of South Travancor, from whence he sent seeds to Kew, where plants raised from which flowered in December last. It appears to me to be a new genus, closely allied to Cyanotis, but differing in its prostrate habit, inflorescence, the arrangement of the bracts, perfectly free sepals, and filiform style, without an inflation below the stigma.

"Erythrotis Beddomei is a stove plant, but well adapted for a warm conservatory during summer, when it may be trained over the pots and made very ornamental; the colouring of the under surface of the leaves is however very variable, and pales much in winter."—(*Ibid.*, *t.* 6150.)

Pear—*Souvenir du Congrès.*—"This remarkably fine French Pear was raised by M. Morel, and appears to have been a seedling from Williams's Bon Chrétien, which it resembles in some respects. The tree makes a fine and prolific pyramid. We have to thank both Mr. Dancer of Chiswick, and Messrs. Rivers & Son of Sawbridgeworth, for specimens, the latter being the largest as well as the best in quality, and measuring about 10 inches in circumference. The fruit is large, obovate or bluntly oblong-pyriform, with an uneven lumpy or slightly furrowed surface; stalk oblique, stout, set on with scarcely any depression, its base surrounded by a patch of russet; eye small, nearly closed, set in a moderately deep russety hollow; skin clear yellow where shaded, flushed and indistinctly streaked and blotched with bright cherry red on the exposed side. Flesh white, fine-grained, very juicy and melting, with a brisk vinous flavour and agreeable aroma. The tenderness and juiciness of the flesh are very remarkable, and the fruit is very handsome. Mr. Dancer's fruit, tasted on August 19th, was scarcely up to the mark in flavour; and we notice that some of the continental growers regard it as only second-rate; but a better ripened sample from Messrs. Rivers, tasted on September 3rd, proved to be excellent."—(*Florist and Pomologist*, 3 s., viii., 37.)

Cultivation of Tropical Fruit.—We understand that a company has been formed for the cultivation of tropical fruit, and is in treaty for a tract of 640 acres of land at Biscayne Bay, at the south-eastern extremity of Florida. This tract was a military post during the Florida war, and has growing upon it a large number of fruit trees—viz., Banana Plantain, Cocoa Nut, Orange, Lime, Lemon, Bread Fruit, Date,

Guava, Mango, and others too numerous to mention. The capital of the company will be $10,000, $7000 of which is already subscribed. Frost never reaches this place; the climate is delightful winter or summer, and perfectly healthy. —(*California Horticulturist.*)

THE SMALL-BIRD QUESTION.

As the small-bird question has again turned up I may perhaps be allowed to say a few words on the subject, not limiting my remarks to sparrows alone, but to the whole family of small birds, of which sparrows are not always the most numerous nor the greatest delinquents. In the present instance we will class them with other small birds. I formed a conclusion on this subject years ago, and I have not seen nor heard of anything to induce me to alter the opinion then stated. Let us now take a peep into Nature's book and see the working of the matter in all its bearings, giving the birds their due for all the useful purposes they fulfil, and contrariwise for all the mischief they do us. Taking the whole matter into one view, we may rest perfectly assured that an All-wise Providence sent both birds and their food in due proportions into the world together, balancing the whole with a nicety which we have no chance of imitating; nay, on the contrary, there is no question but man, more especially in the highly civilised parts of the world, has very much destroyed this balance, and in the case of small birds let us see how this has been done.

If we look into the mode that Nature has adopted to reproduce the various species of living objects that occupy the world we shall see that the smallest, and those that furnish food for beings larger than themselves, increase the most numerously. That is a wise and beneficent law, and is exemplified by birds only in common with other animals. This law is essential to preserving a due balance, founded on the natural principle of supply and demand.

The preservation of game has altered the intention of Nature considerably; the birds of prey, usually so called, whose duty it was in a great measure to thin and weed out the superfluous small birds, have themselves been persecuted almost to entire annihilation, hence the whole family of the little warblers have multiplied out of proportion to their uses; added to this there has been a good deal of sympathy created in their favour by those who are not suffering by their depredations. Such kindly sympathisers think themselves aggrieved because the farmer or gardener destroys some of them in retaliation for the injury they do him. This injury is great, especially in country places where woods and other means of cover give the birds every encouragement to multiply, and where the assiduous gamekeeper has taken the pains to destroy all hawks, owls, magpies, and other birds of a larger kind that either make the smaller ones or their eggs their daily food. This has tended to augment the number of small birds beyond what is necessary; and although the denizen of a city, whose early morning walks may be enlivened by the song of these harbingers of spring, and forthwith rushes to print in their behalf, ought at all events to allow those who suffer from them to give an opinion as well, or rather they as losers ought to have a decided claim for recompense, which can only be done by waging war on the aggressor in spite of a feeling of sympathy which has been thrown into the case and against bird-destruction.

By the extirpation of carnivorous birds and bird-destroying animals by the gamekeeper, the preponderance of small birds is but a natural consequence. These flourish in the home preserves, where a gun is seldom heard, and as a matter of course avail themselves of the luxuries of horticulture. And here, unfortunately for the cultivator, they seem to be fonder of seeds and fruit than of insects. Newly-germinating seeds of sweet green Peas appear to suit their tastes exactly, while amongst fruits the thrushes and blackbirds are most audacious and persistent marauders. Neither is netting effectual. In some way or other the birds will be in. I have known upwards of twenty birds a-day taken from under nets which were considered birdproof, and how many escaped could never be known. I daresay there are those who would advocate the setting at liberty of these caught birds, on the grounds of humane and kindly feeling, and as a protest against cruelty. Their testimony is, however, only one-sided, and the charge of cruelty is at best a morbid one, seeing that they have not suffered any injury. It is not attempted here to be denied that small birds have a duty to perform in the economy of Nature, as have also mice, rats, snakes, wasps, and the like, over which no one, as far as I am aware, has yet thrown the cloak of protection; but when the balance between one class and another is so effectually broken as it is between the small birds and their natural enemies, tomtits, chaffinches, sparrows, and the like abound in greater numbers than are required: hence the reasonable source of complaint.

With regard to the question of birds devouring caterpillars and insects in general, there seems a great difference of opinion on the part of those competent to give one; and the matter would resolve itself into the question, Are gardens which are much infested by birds more free from insect pests than others in populous districts where sparrows are the only birds to be met with in any number? My own opinion would be that birds only look after the caterpillar and insect family when they have young, and I am not sure that they always do that. In this immediate neighbourhood Filbert and Cob nuts are extensively grown, and no class of tree suffers more from the caterpillar than these do; and although there is a difference of opinion about the utility of birds in helping to clear them of these pests, by far the greater number of growers—and they are an exceedingly observant class—assert that the caterpillar-destroying birds are very few indeed. Pains have been taken to shoot several and examine their crops without any token of a caterpillar inside. A friend of mine made a good many experiments of this kind at a time when his plantation was almost denuded of foliage by these vermin, and when he as well as others were employing all the women and boys they could collect together to pick them off by hand. The cost of this handpicking is immense.

Now, if the friends of the feathered creation could train their pets to accomplish this task, it is needless to say what a saving of labour and expense it would be. I cannot at this moment call to memory how many bushels of caterpillars I have heard of being gathered in one season from one plantation, but certainly it was measured by bushels, and yet this was in a neighbourhood abounding in birds of most kinds. So greatly did small birds abound, that the cultivation of Gooseberries has been in some cases discontinued in consequence of the injury done to the trees by the buds being picked out just as they were beginning to swell and start into growth. This evil was so great some years ago that many Gooseberry plantations were done away with, all but one particular kind—a rough yellow one that ripens early, but not large, its buds when in a young state being much smaller than those of the generality of Gooseberries, and consequently less cared for by the birds.

But Gooseberry buds are not the only buds that suffer at such times. Plums are equally laid under contribution, and the wrathful remarks of growers who see a fine tree disfigured by such means may be justly placed in the scale against all the evidence of those who gain but do not suffer by the mischief these lively marauders so quickly accomplish. To listen to these songsters in early morn is charming enough, both to the dwellers of the town and the country fruit-growers; but as the latter are the only sufferers in the case, they can hardly be blamed for taking the law into their own hands. The mere wanton destruction of fruit would seem the aim of the offender rather than satisfying hunger. The birds pick from each and spoil the whole, and pick at a point, too, the best to hasten the fruit's decay. It is all very well to say they may be kept off with nets and such like; it is only those who suffer most that know the difficulties in such cases.

It is needless adding more on this question, which if open to discussion ought to be taken in hand by those who have suffered most by them, as well as by those who think they have benefited by their presence. Mere admirers ought only to have a secondary place, as they ought not to be too urgent in advocating their hobby where it is at another one's expense, as has been shown above.

In conclusion, I would not have it inferred that I am an enemy to small birds where they exist in moderation, as I am fully sensible of their utility, and have no doubt but they will do good in Australia and other countries to which many are being taken. It is only where they are encouraged to a degree disproportioned to the wants of the neighbourhood, and when cultivation has limited the supply of food Nature originally intended them to partake of, as the seeds of wild plants and the like; then I say let a part of them be destroyed. —J. Renson.

I hold a different opinion to Mr. G. Abbey's "boy of fifteen," who asserted that sparrows feed their young on caterpillars,

for the reason that I have opened many young birds and found, instead of caterpillars, wheat, rice, and bread. Still, I believe that they eat some insects, as I have seen them catch moths and pick green fly off the Rose trees. Still, I do not think the good they do compensates for all the injury they commit. Sometimes they will attack the Gooseberry bushes as soon as the leaves drop off, and strip the trees of buds until they are not worth a farthing. Some people say they save us the trouble of thinning the fruit; but I would much rather thin them myself, for the sparrows always take the finest buds which would have produced the largest fruit. I have also been so close to them as to see them pick the buds and shell them, and drop the husks on the ground. I have further seen them pick off the Plum buds. They will sometimes take them until the ground under the trees is entirely covered with husks; they will also take the Red and White Currant buds to the extent of destroying the entire crop of fruit. As to the Peas, Mr. G. Abbey says the sparrows are never so happy as when the Peas are in bloom, but I think they are happier when the early Peas are just through the ground and they can nibble them off from end to end of the row. Linnets I have never seen take the buds, but have seen them visit the Radish and Cauliflower beds and pull up the seeds when just pushing through the ground. I think therefore that Mr. G. Abbey is mistaken in linnets being rapacious bud-destroyers.

Mr. Abbey asks, Why does the sparrow frequent our gardens during the breeding season, as its place is in the farmyard or the barn? The answer is, that at this particular season farmers are employed otherwise than by thrashing, and therefore there is little or no seed for the birds to pick up near the farm buildings. The reason why it follows the footsteps of man is because it finds a certain amount of food about his habitations, such as crumbs of bread swept up and thrown among the ashes and other household wastes, as Green Peas and Potato parings, which the birds are very fond of.

If the sparrows eat so many insects and caterpillars, how is it that fields in the country do not become eaten up with these pests, and over which the sparrow never flies from year's end to year's end? Mr. Abbey says that the whole of its life is devoted to the service of man; I say that a great portion of its life is devoted to the destruction of fruit buds and Green Peas. A dusting of lime is recommended to save the buds, but I find several dustings fail to do so. I am inclined to think the sparrows in Mr. Abbey's garden are different to those in mine if they never take the buds. I have no prejudice against sparrows, but simply state that I have seen them at their destructive work. Instead of regarding them as gardeners' friends I look upon them as amongst our greatest enemies, and I say with Mr. Allcock, Kill every sparrow you can.—R. Walker, *Derbyshire.*

I have been asked to give my opinion as regards sparrows in the garden. I am a general lover of birds, fruit, and flowers; and being in a neighbourhood where there are woods, copses, and hedgerows, I have the pleasure of seeing very many of the former. There are but three birds which visit my garden I would like less of: these are bullfinches, blackbirds, and sparrows. The first I would rather not have one of if I could avoid it. I know of no good the bird does. It is not only a bud-eating bird, but a bloom-bud-eating bird, taking the bloom buds in preference.

Of the blackbirds I like a few, but they are sad fellows for picking holes in the Pears and Apples when nearly ripe, so as to entirely prevent their keeping; yet they do a great deal of good.

As for the sparrows, the only time they are of use is when they have young. But what destructive fellows they are! In the spring they go to work on my Gooseberry bushes in a most unmerciful manner, and the ground underneath is strewn with the buds. Granted, cover them with net. Very well: then look at my Pinks with the crowns picked out; look at my Crocus, the yellow ones, with the blossoms flung here and there; my Cowslips, my Primroses, also so served: these I cannot net over. Then think of the Radish seed, the Turnip seed, the young Peas, the Currant bloom, and other things which I cannot call to mind. No: I would rather, for my peace of mind as a gardener, be without the sparrows. Give me starlings for grubs and caterpillars. It is indeed wonderful the quantity they eat. I have made holes for them to breed in, and I have several pairs; thrushes in swarms at times. Nightingales, blackcaps, titmice, hedge sparrows, robins; all the soft-billed birds, even chaffinches, and greenfinches, and linnets, I like to have; but no, not sparrows. I must agree with some of your contributors that fond, very fond, as I am of birds, I would rather not—much rather not—have many sparrows about if I really wished to enjoy my garden.—Harrison Weir.

[All that can be said for or against small birds being tolerated in a garden, has now been said.—Eds.]

EUCHARIS AMAZONICA CULTURE.

A correspondent, "G. P.," has written in reference to this plant in last week's Journal. I cannot remember writing to any contemporary about it, but can say that it flowers three times in one season from the same bulbs, and has done so for many years. The minimum temperature in the house where it is grown is 65°. The potting material is substantial turfy loam, with a little manure, leaf mould, and sand added. As the plant likes copious waterings the drainage is good.

When the plant has done flowering only sufficient water is given for a few weeks to prevent the leaves from flagging, when they again receive a liberal supply. We have several plants, the largest must have nearly fifty bulbs in the pot. Some of the plants have been tried in cooler houses, but they succeed best in the higher temperature.—J. Douglas.

THE EFFECTS OF OPEN BRICK-KILNS ON THE SURROUNDING VEGETATION.

Observing a short paragraph in a recent number of the Journal on the above subject, I imagine a little further information may not be devoid of interest. I have, to my cost, had some practical experience of the deleterious effects of the sulphurous fumes from open brick-kilns upon vegetation generally, and upon certain trees and shrubs particularly, and record the following facts. First with respect to distance. I have known some things injured at a distance of 300 yards or more, young Larch for instance; and almost all the Pine tribe when in their most active growth, say about the middle to the end of June, and more especially after rain or when the air has been loaded with moisture, have been injured most seriously at this distance.

I have had the leads of Larch entirely killed when young and succulent at 400 yards from an open kiln, but to do this the current must be direct and concentrated. Of course it depends upon the currents, and at such a distance many escape, although apparently in the direct current. How to explain this I never was able, except on the supposition that some plants were more vigorous than others and less susceptible, for I invariably noticed the weakly ones suffered the most.

I have had two actions against an owner for damage done by his kilns, and have gained both. These kilns are all open —*i. e.*, on the old principle, and the fumes given off from such were very considerable, and the sulphurous acid, or vapour of sulphur, being considerably heavier than the atmosphere always has a tendency to fall, and not, as some people imagine, to rise as ordinary smoke; and although the kilns are situated on a higher level than my nursery, the injury was nevertheless done.

The trees injured by the fumes at a distance of from 170 to 300 yards were Plums, Thorns (double pink more especially), Cherries, Spruce Firs, Balm of Gilead, Tea and Noisette Roses, Golden Yews, Pinus excelsa, and Weymouth Pines, Beech, &c., all when in their most active growth and when in a soft and succulent state. On the contrary, Apples, Laurels, Peaches and Nectarines, Arbor Vitæs, Pears, some strong-growing Hybrid Perpetual and other Roses, Privet, Limes, Elms, Hornbeam, Hollies, Cedars, Cypress, Junipers, Oaks, Planes, &c., when growing in the same quarters, and in some instances 100 and 150 yards nearer the kilns, and yet in the direct line from the kilns, have not even suffered to the extent of a damaged leaf.

This is certainly very extraordinary, and why they should be able to stand the fumes I cannot explain, but such I know from experience to be the fact. I do not say that all these trees are proof against the effect of sulphur fumes; but what I do say is this, that at a given distance—say 150 yards—what is strong enough to injure very materially a Plum tree or a Fir in active growth would pass over a Laurel or an Arbor Vitæ, or an Apple tree still in the same succulent state, and not visibly injure it in the slightest. To explain such phenomena is beyond my power, and could only be done by close

observation and scientific inquiry. Perhsps chemistry might do much towards making clear to us what now is enveloped in mystery.

I find also that Peas, especially the early ones, suffer greatly. I had a crop of Ringleader sown for seed totally destroyed—at least so far injured when about 6 to 9 inches high that they never recovered. They appeared as if a hot blast from a furnace had passed over them, browning all the leaves and cutting off the young growth, so that the weeds got master, and the crop was ploughed-up.

Mangold Wurzel and Turnip planted for seed also suffered; but Potatoes much nearer the kilns did not show the slightest trace of injury. Of Corn crops I have found Barley the most susceptible of damage, and have traced the browned and blanched flag to a yard in a line where the current has passed over the crop; and at the time of cutting, the Barley was shorter and the ears smaller than those parts of the field unaffected.

I may just add that the owners of other brick-kilns, from which I have also suffered, deemed it advisable, to put a stop to further damages, to build a new kiln and erect a shaft about 70 or 80 feet high. This they have done, and I am glad to say that since then I have not experienced any annoyance nor noticed any injury; so at any rate it is preventible.—Charles Pennell, *Lincoln Nurseries.*

EARLY POTATOES.

At the January meeting of the Fruit and Floral Committee of the Royal Horticultural Society, Mr. Batters, gardener at Chilworth Manor, Romsey, exhibited a very fine sample of new Potatoes, which took some members of the Committee by surprise. Before giving any award the Committee was desirous of knowing how these had been produced, and the following is Mr. Batters' reply. We need hardly say that upon being informed of the skilful way in which the new Potatoes were produced the Committee at once awarded them a cultural commendation.

"The variety is Rivers's Royal Ashleaf, dug from open ground, June, 1874. They were laid thinly in a spare upstairs room, and on October 2nd were potted in 32-sized pots. Placed first on the back shelf of a Melon house, they were afterwards removed to the back shelf of a cold house on October 20th, being then 9 inches to a foot in height. They remained in the cold house until November 24th, having plenty of air during the day, and then removed to a small Fig house, through which a little piping runs on its way to early Vines. I shifted a few into larger pots at this latter date (November 24th), but found no benefit from the shift.

"I sent the first dish to my employer's table on January 1st, 1875, about the average size of those sent up last week. My employer and her guests told me they were beautiful, and not at all close. I potted another lot this month, January 23rd, and another yesterday. I find one can accommodate a dozen or two pots when one cannot command a frame, and you can also imitate summer with the soil better in pots than in a pit.

"I am trying Vegetable Marrow from cuttings put-in in autumn. With your permission I will communicate the result by-and-by.—J. Batters, *Chilworth Manor, Romsey, Hampshire.*"

PACKING FLOWERS.

I observe in your issue of February 18th a description of a plan of packing flowers to send by train or long distances. I have the produce of gardens and glass houses sent up to London each week, and my hampers and boxes leave the house in the country at eight o'clock one morning, and after jogging in a country cart eight miles to the nearest station reach London at twelve o'clock the next day, thus passing twenty-eight hours closely shut-up. After many unsuccessful attempts I have at last adopted a plan which succeeds perfectly. My carpenter has made two common deal flower boxes 8 inches deep, with two trays each, which fit into the inside by a very simple contrivance, and leave space between each of 3, 2½, and 2½ inches. Upon these trays the gardener lays as many flowers as he can without putting one over the other, and when they are unpacked and have been in water for a few minutes they are as fresh as if newly gathered. Camellias, Roses, splendid double Hyacinths, Orchids, and Ferns, carry in this way most satisfactorily. The carpenter has put hinges and a lock with two keys to each box, and painted the address in full on the outside, and I have now for a few pence weekly the full enjoyment of all the flowers grown 150 miles away. I venture to recommend this plan to others, as it is in every way desirable to keep as much as possible *en rapport* with establishments which are frequently left for eight months out of the twelve without the supervision of the owners. I adopt also the same plan for fruits and butter, leaving the vegetables to be sent in a common hamper, altering the dimensions of the boxes and the spaces between the trays to suit the different articles put inside.—A Constant Reader.

CULFORD HALL.

Culford Hall, the seat of the Rev. Edward Richard Benyon, is about four miles N.N.W. from Bury St. Edmunds. The estate includes the five parishes of Timworth, Ingham, Wordwell, West Stow, and Culford, and exceeds in extent 12,000 acres. The land varies in character, but is mostly light, upon a subsoil of gravel or chalk. This manor appears to have been given at an early period to the Abbey of St. Edmund, but afterwards became the property of the Bacon family. The Hall is a large handsome mansion, and was built in 1591 by Sir Nicholas Bacon, and passed with the estates by marriage into the noble family of Cornwallis. It was purchased about the year 1823 from the executors of the last Marquis by Richard Benyon de Beauvoir, Esq., uncle of the present proprietor. It is surrounded by a park of some five hundred acres in extent, which is remarkably well wooded, containing fine specimens of ancient Oaks, Elms, Beeches, Horse Chestnuts, &c. It is also embellished by a fine piece of artificial water on the south side of the Hall; this is formed by a tributary of the river Lark, and was designed by the celebrated landscape gardener Repton, and its skilful disposition gives evidence of the talent of its designer. At about a quarter of a mile west from the Hall the water is spanned by an extraordinary massive iron bridge, which was erected at an enormous cost by the first Marquis of Cornwallis on his return from India. The chief approach to the mansion was made to cross the river by way of this bridge. But the principal entrances are now in the village of Culford.

The church stands in the pleasure grounds a short distance from the Hall, and is exceedingly neat and ornamental in appearance, being built of flint, with facings of Caen stone. It is furnished with a square tower of very chaste proportions. It was rebuilt in 1856 on the site of a former church, which was of great antiquity, and contained many ancient and interesting monuments to different members of the Bacon and Cornwallis families, all of which have been carefully preserved. It is worthy of mention that the present proprietor of these estates has, since he came into possession of the property, rebuilt or restored the church of each of his five parishes, and has also built an entirely new one for the benefit of the inhabitants of the northern portion of the parish of Culford, which is five miles in length.

The conservatory stands near to the Hall, and has a small flower garden and fountain in front of it; while in the rear of the structure, and communicating with it, is an exotic fernery containing fountains, waterfalls, &c.; and a wilderness or hardy fernery occupies a position near to the gardens.

In the grounds are some good specimens of the Cedar of Lebanon, the Deodar Cedar, Wellingtonia gigantea, Picea Pinsspo, Irish Yews, &c. The gardens are situated on the east side of the Hall, and at a distance of some 500 yards from it. They contain upwards of eleven acres, and slope gently to the south, and are surrounded and intersected by brick walls of various heights. These gardens also contain about 1500 yards of Yew hedges, which vary in height from 4 to 12 feet. The principal walks are 10 feet wide, and the walls are pierced where necessary by circular arches of the same width.

There are a considerable number of glass structures of various kinds—viz., two span-roofed orchard houses each 90 feet long, 20 feet wide, and 12 feet high, chiefly devoted to the culture of Peaches, Nectarines, and Cherries. A lean-to Fig house, 220 feet in length; 200 feet of wall, on which Apricot trees are trained, and dwarf standards planted in front of them at a distance of 5 feet from the wall, and so arranged that a glass roof is placed over them when the trees begin to bloom, and taken off when all danger from frost has passed. By this means a crop of fruit is always secured. The ripening of the fruit of the standard trees succeeds that of the trees trained to the wall, and by this means the season of this useful fruit is greatly prolonged. There are also a greenhouse 30 feet long, a plant stove, Melon house, Cucumber house, and Strawberry house; an early Peach house, two small vineries

for early forcing, planted chiefly with the Black Hamburgh and Muscadine varieties—one for late Black Hamburgh Grapes, one for Muscat of Alexandria, one for West's St. Peter's and Black Alicante, one for Lady Downe's and Mrs. Pince, and one house which contains various sorts, together with pits used for the purpose of forcing early Potatoes, Asparague, &c. We will now add the notes of another correspondent.

Being in the neighbourhood of Bury St. Edmunds, I took advantage of the opportunity to spend a few hours with Mr. Grieve, the head gardener to the Rev. E. R. Benyon, so well known to the horticultural public by his skill in crossing Pelargoniums of the Zonal section, especially the Tricolors. On first entering the kitchen garden the visitor is struck by the way it is laid out, and the method of training the Gooseberry bushes. Very stout poles are inserted in the ground at the base of each bush, to which the trees are trained in the pyramid fashion. A whole quarter is devoted to the bushes, and ample space allowed between the rows to allow of gathering the fruit with facility. The quarters of the garden are divided and subdivided by Yew hedges; these are regularly furnished throughout, and have been clipped and trained with mathematical precision. This is certainly a very pleasing arrangement so far as effect is concerned, but its advantages are doubtful. The hedges may shelter some crops, but they occupy much space, and would not do where ground is valuable.

There are likewise extensive ranges of glass houses in the kitchen garden. The first range we enter is a Muscat house and Peach house. Some excellent Muscats were still hanging on the Vines; the bunches were small, but the berries possessed that high golden colour indicative of good cultivation

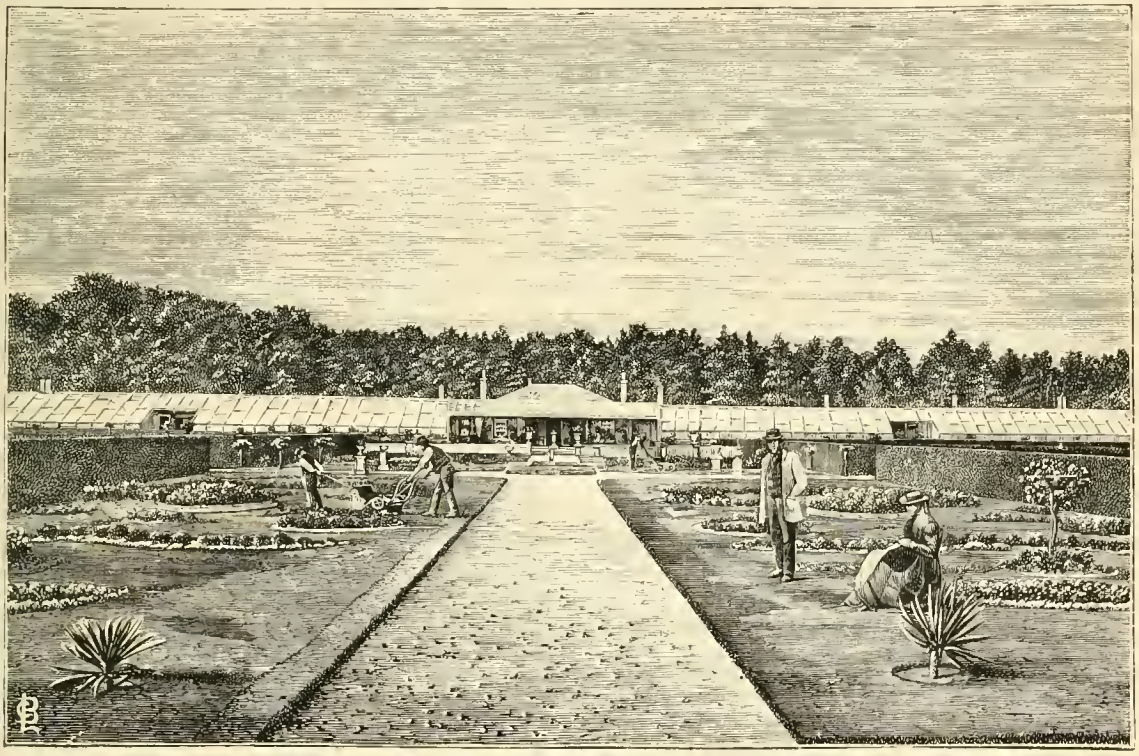


Fig. 43.—The conservatory and flower garden at culford hall.

Mr. Grieve cuts his spurs back close to the main stem, not caring to cut to a good eye, which soon causes unsightly spurs to form, but which is the sure way to get large bunches. Most interesting to me were the two fine orchard houses. There is a bed in the centre, which is planted with one row of Peach trees 6 feet apart. The side borders are planted with Cherries, all the trees being trained in the bush or pyramid form. From some cause Cherries do not succeed in the open air at Culford, but excellent crops are obtained in the same house with the Peaches. Some cultivators experience difficulty in getting Cherry trees to set their fruit; but this need not be, if only the atmosphere can be dry and air admitted night and day. Black Hamburgh and Royal Muscadine Grapes are grown over the passages from Vines trained to wires near the glass; these two sorts are the very best that can be planted in such position. Another orchard house is devoted to Peaches and Nectarines planted out and trained to a trellis overhead. The training was different from anything I had previously seen. It may be styled cordon training: main branches are trained either horizontally or vertically, and the side growths roughly spurred back after the manner of Vine rods. A large number of varieties are grown. I inquired which were the best Peaches, and they are Noblesse, Belle de la Croix, and Grosse Mignonne; and for early forcing, Royal George. Nectarines—Elruge, Imperatrice, and Pitmaston Orange. Mr. Grieve does not grow Pine Apple, but it is certainly superior to all of the orange-fleshed sorts.

Decorative plants are trained to the back walls in some of the houses, notably Habrothamnus elegans, which was plentifully covered with deep rose-coloured flowers. Begonia insignis, one of the very best for winter flowering, is much grown. Amongst the bedding plants wintered in these lean-to vineries were a large number of standard Zonale Pelargoniums, single and double-flowered. The plants are trained to a clear stem of 3 or 4 feet high; the heads are trained to a circular wire, and the plants supported by a stout stick when they are planted-out in the beds. These plants, many of them ten years old, are very useful for planting in the centres of beds and as single specimens on a lawn. Of bedding Pelargoniums the best white-flowered variety is a hybrid raised at Culford named Dolly Varden; it is a cross between a bronze Zonal and P. peltatum elegans. Bronze Harry Hieover is the best for small beds. Culford Rose and Culford Pink are both very useful varieties for vases, especially the former. Bridal Wreath, another hybrid Ivyleaf, is a favourite here.

The vineries contain the Vine described and figured in the Journal (see page 583, No. 718) from which the bunch of Golden Champion was cut from a cane of Trebbiano. I did not see the bunch hanging, but those who did see it had no doubt whatever but that it was Golden Champion. It has also been found that Muscat Hamburgh succeeds remarkably well worked on the Froutignau stock. In the Lady Downe's house, where a very large crop was hanging, were a few rods of Mrs. Pince's Black Muscat, which is much liked for its good flavour, but it

does not keep nearly so well as Lady Downe's. The Vines are trained on the double-rod system. A large house is devoted to Fig culture, the trees being trained to a trellis fixed under the glass and also against the back wall, the varieties most approved of being Brown Turkey and Raby Castle.

In the stove the beautifully-marked leaves of many different varieties of Coleus had an excellent effect. A fine specimen of Adiantum farleyense was noticeable. The old Centradenia rosea floribunda was flowering very profusely, and an excellent plant it is for decorative purposes during the winter months. In the greenhouse Coronilla glauca is largely represented; it will thrive under ordinary treatment, and is very useful either for cutting or decorative purposes. I also noticed a very handsome specimen of what seemed to be Clianthus puniceus, the Glory Pea of New Zealand, but it was of a much more robust growth than is commonly seen. It is evidently a variety of the species, and has been named Magnificent. The Clianthus is a good pot plant, but to see it in all its glory it should be planted in a conservatory border. The coolest treatment suits it, and if kept free from red spider by daily syringing when it is making its growths it will soon make a large plant or bush 12 feet high, which when loaded with clusters of its large crimson Pea-like flowers is an object of great beauty. I noticed in the conservatory a number of well-flowered specimens of Salvia splendens; their numerous spikes of brilliant scarlet flowers were very attractive. There was also a good stock of healthy plants of the double white Primula sinensis. This is rather a difficult plant to keep through the winter, but the flowers are useful for cutting, and they also remain in good condition on the plant for a very long time. Attached to the conservatory is a fernery under glass; it is formed of artificial rockwork, the Ferns being planted in nooks in prominent positions, where a sufficient depth of mould can be obtained; the groundwork is principally composed of Lycopodium denticulatum. I noticed the following Ferns:—Adiantum scutum and A. cuneatum, Nephrolepis exaltata; Lygodium scandens, the climbing Fern; Cibotium spectabile, &c.

There is a neat flower garden in front of the conservatory, but the principal part of the bedding-out is done at the kitchen garden. A series of beds have been laid-out in front of the gardener's cottage, which has been erected about the centre of the hothouses. The plants had all been cleared from the beds at the time of my visit, but under the management of such a master as Mr. Grieve they are no doubt worthy of Culford. —J. Douglas.

THE LATE MR. DOWNING'S AURICULAS.

A writer in one of your contemporaries, in an appreciative article on the Auricula some time ago, said that he thought there was something in the flower that seemed to fascinate the grower, and that it was the last fancy that clung to a florist in his declining years. I believe it is true. There are no florists, I believe, so mad as Auricula-growers; there are none who give so much personal care to their pets as they do, and it is the last thing they relinquish. Mr. Lightbody gave up his Pinks, Tulips, and Ranunculuses, but he still kept his Auriculas; and although Mr. Downing had been a celebrated breeder of shorthorns—so much so that one animal of his breeding some years ago sold for £1700 by auction—yet they were given up. He had his garden and greenhouses, but the care of these was relegated to his gardener; but his Auriculas he repotted and cared for himself. I never had the pleasure of meeting him; we have corresponded, and his letters were those of a kindly and enthusiastic lover of flowers.

I should suppose that his collection must have been certainly one of the largest, if not also the richest in the kingdom. It comprised a row of four three-light frames containing very nearly a thousand plants in 24's, and another pit 48 feet long filled with seedlings. Every variety in growth of any value was to be found here, and many of them in large quantities. He had grown them for thirty or forty years, and was as enthusiastic over them as ever. He had many seedlings of which he thought highly. All this fine collection was disposed of last week. A large number of the lots (which were put into too large quantities to suit amateurs) were bought by our great southern Auricula-grower, Mr. Charles Turner of Slough, and the others by nurserymen, only one lot, I believe, having been bought by an amateur.

Mr. Downing's illness was of very short duration, and his death quite unexpected. Although never an exhibitor, yet we see he was a most enthusiastic grower of this fine flower; and we are sorry to miss from the roll-call of the Auricula-lovers one who, with a fine property and with everything at his disposal for any fancy he might indulge in, yet to the last never deserted the flower which he had wooed in his early days as to many of us have done, and which exerts so strange an influence over us even to old age.

I am indebted for these few facts to Mr. John Gray of Hagley near Stourbridge, who was a friend of Mr. Downing's and also an enthusiastic Auricula-grower.—D., *Deal*.

JOTTINGS ON LAST YEAR'S GARDENING.

No. 4.

Radish.—Long Scarlet Short-top is the only one of the long-rooted kinds grown after the first sowing in spring, Wood's Frame being shorter and earlier. The best of the Radishes grown last and previous years is White-tipped, Olive-shaped, or French Breakfast, it being of very quick growth, very tender, and mild flavour. Olive-shaped Scarlet differs but little, except in being finer in colour and of quick growth. The Olive-shaped are the best of Radishes, either for outdoors or forcing. The red and white Turnip kinds are also good, but stronger in flavour than the Olive-shaped. Sown in August (third or fourth week) the Olive-shaped will be fit to draw in October, and, protected from frost by mats or straw in severe weather, they will be in good condition the greater part of the winter. Californian Mammoth was sown at the same time as the last of Olive-shaped, August 31st, and came to nothing. The seed was evidently sown too late, but the Olive-shaped are good now—end of January. The first outdoors were drawn on April 30th, in 1873 on May 8th.

Rampion.—This root seems to be coming into favour, and requires to be sown in April for autumn use, and in May for storing to keep over the winter. By some the roots are preferred to Radishes. The roots last year were small.

Salsify.—This was fine, and the frequent call for it shows it was relished. It makes, I am told, a nice dish. It was first used on November 12th.

Scorzonera.—More nutty-flavoured than Salsify. It is a good vegetable for winter, but it was a complete failure. In 1873 the first dish was sent in December 30th (it is ready in October), and last February 26th, 1874.

Savoy.—Tom Thumb is the earliest, and may be planted a foot apart. Drumhead is best, but not so hardy as Dwarf Green Curled. The first was cut December 7th (Cabbage was abundant until then), and last January 31st.

Seakale.—Raised from seed it made less growth than usual last year; generally by one year's growth plants were fit for forcing, but this year they were no use, the small crowns of the former year's sowing far surpassing the seedlings. It is taken up for forcing, but some is covered with pots and comes on naturally. The pots are put in the Mushroom house about a hundred every fortnight, commencing last year November 9th, and continuing until March 13th. Before Christmas twenty to twenty-one days are required from putting in the roots to cutting the Kale, while roots put in after are ready in a fortnight. It was first cut December 8th, and in use until June 16th.

Spinach.—Despite the drought it did well. A rich soil makes up for want of moisture, and for Spinach it can hardly be too much so. Summer or Round is best for spring and summer sowings; Prickly the best for winter; Flanders is a good winter sort with round seed. The Prickly sown about the 10th of August comes-in in October, and lasts in condition until the spring sowings come in.

Tomato.—Hathaway's Excelsior is a smooth ribless variety; Early Prolific not so desirable as Orangefield Dwarf. Tomatoes do no good here outdoors.

Turnip.—Early Snowball and Early White Stone or Six-weeks were both good. Orange Jelly for winter has no superior. After the first sowings, which are best made on a warm border, an open situation on a north border is desirable. Chirk Castle Black Stone is an excellent keeper, and its flesh being white is by some preferred to Orange Jelly. Turnips, with Carrots and other soup ingredients, are expected throughout the year.

Vegetable Marrow.—The season being warm these did well, but under the first moist weather in early autumn the plants succumbed. Custard invariably does badly. The Short-jointed Long White is the best of the Marrows.

Rhubarb.—Johnson's St. Martin's, a fine improvement upon the small Scarlets. The stalks are red inside as well as outside. It is as early and productive as any, and better

flavoured. Next to this I like Linnæus, which forces better than Royal Albert, and is larger, but the palm for forcing must be given to Johnson's St. Martin's. For general use Victoria is recommended. Monarch is the largest; it has a monstrous leaf and thick and green stalk.

Shallots could not stand the drought and were small. The large kind is not so good as the small one. Potato Onions, with Garlic, maggoted and were severely mildewed.

Jerusalem Artichokes are much used. They are easily grown if the soil be good and light.

Potatoes.—Very little or no disease. Crop good, quality of earlies good, but the late kinds indifferent. There has been little addition made to the number of kinds, for the simple fact that the old ones are so good. Sandringham, the old and true Ashleaf, is earlier by a week or ten days than Myatt's Prolific Ashleaf, and commences to grow much earlier in store than any of the Ashleafs, the eyes not unfrequently proceeding from a shoulder or knob. The Royal Horticultural Society say it never blooms, which it does with me every year, and always did for the last thirty years, as I have seen it by the acre on the sandy loams abutting the warp of the Ouse. Mona's Pride I have given up, being better served by Myatt's Prolific and Veitch's Ashleaf. The latter has a dwarfer haulm, and is very prolific and of excellent quality, coming into use at the same time as Myatt's Prolific.

To succeed those I grow Lapstone, which upon our light soil is excellent alike in cropping and quality. Bryanstone Kidney is later than Lapstone, has large fine-shaped tubers, very prolific, and of excellent quality. It is a desirable kind. Rector of Woodstock I had last year for the first time, and it is very prolific; the tubers though not large are numerous and of a good, useable, even size, flattish round, with a white smooth skin, and the eyes not sunk but level with the skin; altogether a very handsome tuber. The quality is said to be excellent, but I am so pleased with its appearance that all have been saved for seed. The haulm though robust is only of medium height, and no more spreading than an Ashleaf. It ripens-off in good time, coming-in about the same time as Lapstone. Victoria is grown to succeed those aforenamed, and does not do so well as the others, the haulm becoming much too strong, and the quantity and quality of crop suffer, and disease appears. It is, however, a heavy cropper, and the quality is good. Those are the dependant kinds, with Walker's Regent for winter, which is a good cropper, large, and excellent in quality. We still keep a few of Hundredfold Fluke (Suttons'), which has never had disease; Red-skinned Flourball (Suttons'), immensely large, and not had disease; Excelsior, Willard, Late Rose, Early Rose, and three nameless sorts, one flattish round, a rough skin, boiling very floury; a piebald round kind from Belgium; and a rose kidney. Many kinds have been discarded as either coarse, poor croppers, or indifferent in cooking qualities.—G. Abbey.

SEAKALE AND RHUBARB TUBS.

On reading Mr. J. Wright's notice of this, to him, new invention I was led to exclaim, "Nothing new under the sun!" It is now more than twenty years since I saw the same sort of boxes used by Mr. W. Thom at Newtondon, near Kelso, N.B. Probably he still uses them. Mr. Thom's boxes were made in the same way, but instead of being narrower at the top they were of the same width throughout. I think this an improvement, especially for the Rhubarb, as even with the wider top I found it difficult to get the sticks out without breaking them; and being kitchen boy at that time I had some experience of burrowing amongst the wet dung and leaves. I also remember that the boxes were fitted with a lid, in the centre of which was a round hole about an inch in diameter. This was to allow of the escape of any steam that would find its way from the fermenting material into the box, and by pushing the fore finger through it the lid could readily be removed.

In this neighbourhood a much cheaper and quite as convenient an article is the flour barrels which are sent to this country from America. They can be bought at any flour mill for a small sum—from sixpence to one shilling each. One end is always out when they are bought, the other end must also be knocked out. A cross piece of wood is then nailed on to the lid, which projects an inch or so over to prevent it from falling into the barrel. We have long ago given up this system of forcing Rhubarb and Seakale.

The flour barrels are still used, but in a very different way. The Rhubarb is first dug-up, and then packed as close as possible in the bottom of the barrels, with the crowns up of course. A little mould is then put in, but not so much as to quite cover the crowns. They are then removed to a vinery, Mushroom house, or anywhere where a high temperature is kept up. Rhubarb can be obtained much quicker and with far less trouble in this way than by wheeling a lot of fermenting material to the plants. Of course those who have not forcing houses must get it in the old way still.—J. Douglas.

I am glad to have drawn attention to this useful and simple home-made article, as it may bring that, or something better of the same nature, into general use. This would be an advantage to many who have Seakale to force and neither pots to cover it with nor a Mushroom house or other warm structure in which to introduce the roots. Other cultivators have, it seems, long used similar boxes, but I know they are not general, not nearly so much so as the unfortunate conditions of the many who are neither provided with pots nor houses, but who are expected to force these vegetables. As to their originality, I was careful not to commit myself on that point, as so many "original" things have been used "years ago" when their utility becomes known. That, however, is a very secondary matter. The main point is, Are they useful? As seen at Burghley they were serving their purpose admirably. I simply recorded that fact, and "wondered that something of the same simple and effectual nature had not been in use long ago." That such has been adopted and answered well is only confirmation of their usefulness. I will wonder again—this time why my friends imply that I mentioned them as "original," when I did nothing of the kind. But, thanks to Mr. Gilbert, the box is before the public. Those who have proved it worthless will of course not use it, while those who have no pots are provided with an example of a very good substitute, and if by the aid of these boxes they secure produce equal to that of Mr. Gilbert they will have good cause to be satisfied.—J. Wright.

TROPÆOLUM MINNIE WARREN.

As the time is at hand for preparing for the summer decoration of flower borders and beds a few words about this plant may not be out of place. I have an idea that this Tropæolum is not so much cultivated as it ought to be, and I recommend a trial of it to those who have not grown it for bedding purposes. For ribbon borders or for clumps in the herbaceous borders I think this variety cannot fail to give satisfaction. I have used the plant with great success, and visitors never failed to take note of it as a desirable addition to their own collection of bedding plants.

The plant is of compact dwarf habit, with foliage of light green and creamy white colours. The flowers can either remain or be picked off, as the circumstances may dictate. It contrasts well with many of our bedding plants, but more especially those having dark foliage.

I find that an old stove plant or two kept through the winter will furnish a good stock of cuttings for striking in the spring, which they do freely in a sandy compost, and placed in a gentle bottom heat. If potted-off when rooted, and encouraged to grow freely, they make good plants by planting-out time. Cuttings will also strike in early autumn in a shady pit without bottom heat, and may be wintered in the store pots. I have not proved whether this variety can be raised true from seed. It will grow freely in any ordinary garden soil.—H.

NOTES AND GLEANINGS.

An International Horticultural Exhibition will be opened at Cologne during the present year under the patronage of the German Empress and the Crown Prince. The General Committee has issued a circular inviting all who take an interest in the progress of gardening to contribute to the Exhibition. It is to comprise all horticultural plants and productions (with the exception of Vines and Grapes, which are excluded, owing to the possibility of introducing the Phylloxera vastatrix), also working implements, machinery, as well as collections of any kind connected with rural life and the development of garden culture.

—— Lady Cullum died suddenly on the 16th inst. at her residence, Hardwick Hall, near Bury St. Edmunds. She was the widow of the Rev. Sir Thomas Gery Cullum, Bart., who died in 1855. She delighted and had great taste in gardening, and this may be appreciated by a reference to our views and

descriptions of the dressed grounds at Hardwick published in this Journal so recently as January 21st and 28th. In all her plans she was aided by her head gardener Mr. D. T. Fish. It is stated that she had been talking with him, and giving directions for the planting of that funereal tree the Cypress just previously to the seizure, which almost immediately proved fatal. We extract the following from the *Bury Free Press* :—

"Few things are a higher testimony to character than the length of time that dependants cling to and serve the same employer with the unstinted measure that love gives. Judged by this standard her ladyship stands out as a model employer. Mr. Samuel Barrett may be said to have been at Hardwick all his life, Mrs. Peat for thirty-four years, Miss Woodfine for nearly a quarter of a century, Mr. Fish twenty years, and some of the under servants and labourers for terms equally long or longer. As a patron of horticulture Lady Cullum has long stood pre-eminent. Assisting her husband, the late Sir Thomas Cullum, in all his undertakings to beautify and adorn Hardwick, her ladyship has gone on always adding to the extent of the gardens and enriching their beauty. Her last work—in which she was busily engaged only a few minutes before the attack that terminated her useful life—was determining the site, with Mr. Fish, for a few more ornamental and rare trees. The Bury and West Suffolk Horticultural Society is under the deepest obligations to her ladyship for her cheerful readiness to grant the use of her grounds on all occasions when required; and even this season Lady Cullum had the generosity to offer Hardwick to them should the Bury and Thetford Railway not be open in time to allow the Society to hold their summer fête at Ampton."

NOTES ON VILLA AND SUBURBAN GARDENING.

The snow that has fallen within the last few days, and the slight frosts we have had with a very cold northerly wind, will prevent vegetation from advancing too rapidly, and thereby be an advantage; it has for a time also prevented the progress of some work in the kitchen garden, to which when the opportunity arrives the amateur must turn his attention. I allude to the following crops :—

Jerusalem Artichokes.—Where these are grown the tubers should be planted at once similar to Potatoes, and not less than 2 feet between the rows, but allow 6 inches more if space can be spared. A deeply cultivated soil is necessary for them, although it is usual to plant on one of the worst spots in the garden, which is a mistake, because this vegetable is as profitable in yield as a Potato, if not more so, inasmuch as it is not subject to the disease. It is a custom to allow the bed to stand for several years without replanting. This, too, is a mistake, for then the tubers degenerate in size, and being an ill-formed tuber there is great waste in preparing for cooking. They should be grown as large as possible, and this is best done by making a bed annually and encourage them by manure and good cultivation.

Parsnips.—These may be sown as soon as the ground is workable on the surface. This being a deeply-rooted and exhaustive crop for the ground, the soil should be rich and deeply dug or trenched; but I presume the trenching of the ground has been done some time ago, the advantages of which have been previously stated. The sort known as Hollow-crowned is usually grown, but this in rich soils is liable to canker. I grow this and the Student, a somewhat smaller-growing sort, but a good shape, and so far as I have seen is free from all disease.

Potatoes.—To succeed those in frames a crop of the Early Ashleaf may be planted on a warm border. I advise also the planting of Myatt's Prolific at the same time, which for an early and reliable sort outdoors is not beaten yet, and one succeeds the other. There are now many excellent sorts for general cropping which must be noticed when the time comes for planting, but my idea is, that for small gardens a good-cropping Potato such as Myatt's Kidney must not be set aside without a weighty consideration.

Carrots.—Sow a small space in a warm corner, in rows 1 foot apart, of the Early Horn kind, and take care that they are dusted with lime and soot as soon as the young plants appear, or they will be eaten-off by slugs in a single night. Sometimes they are eaten-off before they are really out of the ground. A good preventive is to mix lime and soot in the soil before sowing the seed, working it up with a rake. A few Radishes may be sown between the rows, the same as if in a frame, so that they can be pulled off without interfering with the Carrots.

Spinach.—A capital summer vegetable and quickly comes in for use. Sow a crop now between the rows of Peas or Broad Beans. Except for winter use it is scarcely necessary to take up a separate piece of ground for it, as it is a crop which is soon cleared off.

Turnips.—At the end of the month sow a piece of ground with Early Stone and White Dutch; the one succeeds the other when sown at the same time. It is just possible that some of these will run to seed, but a vegetable of this kind is generally required as early as possible; therefore, if only a few dishes can be secured they are worth all the trouble. As soon as the crop is up and fairly started into growth another of the same sorts should be sown. The first crop may be on a south border, but those sown during the summer should be put on a partially shaded piece of ground.

Onions.—First determine the size of bed required for these, and the first opportunity sow one half, and the other half at the end of next month. Choose a fine day with a dry surface to the soil, put the rows about a foot apart, and if the soil is rather light tread the seed in with the foot before raking over the surface. Autumn-sown Onions are more vigorous growers, and if they are now standing thick in the bed enrich a piece of ground with manure and prick-out as many as are required. Do not plant these too deeply, but just so that the roots are well fastened in the soil.

Peas.—Of these another crop must be sown as soon as the others previously sown are fairly above ground. At this time of the year my plan is to sow both a tall sort such as Champion of England or Emperor of the Marrows, and Yorkshire Hero, Veitch's Perfection, or McLean's Premier. The dwarf sorts are great bearers, but do not last so long as the tall sorts; moreover, they come in for use before the others, which gives a succession if all are sown at one time.

Broad Beans.—Plant a few rows at a time to keep up a succession, as they soon get old in the pod. There is a sort named Hardy's Pedigree Windsor spoken very highly of, which might be safe to try with some of the old sorts; but I do not advise anyone to depend upon any new vegetable until it is tried with others, for the safe reason that if it should fail there is a vacancy in the supply.

The above is the principal of the main cropping to be done at present, but there are other things in the way of small seeds to be sown now. These include a few seeds of Cabbage, Cauliflower, Brussels Sprouts, Celery, Dwarf Ulm Savoy (a small sort for summer use), Lettuces, Radishes, and Snow's Winter Broccoli. If sown out of doors choose a dry sheltered spot for them, and mix lime and soot with the soil before sowing; afterwards lay some slight protection over the surface, and take it off when the seeds are just coming out of the ground—that is, if the weather is favourable. But if glass protection can be spared it will be best to sow Celery in a box or pan, also Lettuce, Radish, and other small rather tender seedlings in soil made-up for the purpose and covered with the glass.

Parsley is always wanted in every garden, and a good breadth of it should be sown now. The seed may be sown broadcast, but for small gardens it is much preferable to sow it in rows by the side of walks, so as not to take up so much space.

Cauliflowers under handlights must frequently have the glasses taken off to keep the plants dwarf and hardy. Stir the soil among them, and dust with lime if necessary. Fill-up Cabbage plantations with plants from the store bed sown in autumn, and likewise move the earth among them. Other crops that have not had the benefit of the earth being moved for a long time, will be the better if the first stirring be done with a three-pronged hoe, which would leave the soil beneath in a better condition than if done with a draw hoe.—Thomas Record.

DOINGS OF THE LAST AND PRESENT WEEKS.

HARDY FRUIT GARDEN.

As soon as the surface of the soil is dry enough the Dutch hoe will be run through the rows of Strawberries, not so much to kill weeds as to aërate the ground. It is best to go over the ground first and pick up the largest weeds by hand. The hoe is kept at work amongst the plants, so that not a weed is to be found by the time the flower trusses are thrown up. A comparison is sometimes made between our present system of annual renewal of the beds, and the old one of allowing the same plants to occupy the ground for half a score or more years. Late in autumn or during the winter months the beds or quarters received their annual dressing of manure, which was dug or forked-in between the rows. In soils unsuitable to the Strawberry many plants died annually, and the rows had to be made up with young plants. The same old system of Strawberry culture prevails in many good gardens at the present time. "D., *Deal*," writing last week, has gloomy forebodings about his own prospects of a crop this year. If his soil is light, and he continues to work on the three-years system, many of his plants will die the second year, and, as he says, be "very spotty" the third. It used to be so in the soil at Ilford, but since commencing the one-year system we never fail to secure a regular crop of fine fruit. It is necessary to prepare the plants annually in small pots as early as the runners can be had.

Raspberries have had some rich manure forked-in between the rows, taking care not to injure the roots. One portion of the plants are trained to a single stout stake driven into the ground,

and to which four or five canes are tied, the plants being in rows 3 feet apart and 4 feet between the rows. This is an old method of training, and it is still practised by many good gardeners. The other method of training is certainly preferable, and is the same as that described by "D., *Deal*," last week. The same distance of 4 feet should be allowed between the rows; but we put the plants only 18 inches or 2 feet apart in the row. The wire to which the canes are tied should be tightly strained by being fixed to strong permanent supports at each end of the rows. Raspberry plants ought to be planted in the best soil, and a shady position answers better for them than one exposed to sun.

FRUIT AND FORCING HOUSES.

Vineries.—The earliest house is now in flower, and the berries seem to be setting very well. The temperature is always kept a few degrees higher when the Vines are in flower, nor is it well to allow the evaporating troughs to be filled with water, although the Grapes set better in a moderately moist atmosphere than they do in a dry one. A celebrated grower of Muscats stated that he always found the berries set best when he sprinkled the bunches with water through the rose of a water-pot when in flower; this he did every day. Others syringe the Vines daily when they are in flower. We do not approve of either method. All we find necessary to assist in setting is to give the branch a gentle tap with the hand about twice a-day; the paths and surface of the borders are sprinkled with water once a-day at least. We have had very cold winds from the east, with little or no sun. At such a time the ventilators must be opened very cautiously—a narrow opening about half an inch wide at the highest part of the roof is all that can be done, and this about four hours at mid-day. The growing shoots are usually tied down in their places by the time the Vines are in flower, and very little attention is required after the berries are set, as Vines that are bearing a full crop of Grapes do not make much growth.

Succession houses are having the growths stopped and trained. Only one growth is allowed to each spur, but it is best to allow two to remain until one has been brought down to the wire. This is only necessary when the shoot to be trained is in an awkward position, and there is danger of it snapping in the course of training. All the growths should be brought underneath the wires, and, for the sake of appearance, all should be trained if possible at the same angle. The latest houses are being prepared by washing the wood and glasswork, washing and painting the Vines with the usual compost, removing the surface soil and dressing with a rich compost.

It was recently stated that the latest Grapes were cut and the end of the branch to which the bunches were attached inserted in water. Some persons do not yet understand how this is done. Our plan is very simple. The glass bottles used are clear, so that the water can be seen as it diminishes, and can be refilled again without running it over. A string is tied to the neck of the bottle to fix it in a slanting position by tying it to a lath just over the fruit-room shelves, the bottom of the bottle being allowed to rest on the shelf. Those who wish to put their Grapes in a room that is not furnished with shelves will find a very suitable contrivance in a Grape rail invented by Mr. Kemp, gardener to his Grace the Duke of Northumberland. The bunches on this are arranged in rows one above another.

CUCUMBER AND MELON HOUSES.

Seldom have we experienced such unfavourable weather for the culture of the above. By a low temperature with absence of sun the leaves grow flimsy, so that it is necessary to throw a slight shading over the glass to save the leaves if the sun shines for a few hours. Too much moisture in the atmosphere is to be avoided at this season. All the vapour required in the atmosphere can be obtained from water sprinkled on paths, walls, &c.

Just a word here on sowing Cucumber and Melon seeds. If they are sown in a frame over a hotbed it is best to plunge the pot in the bed when the violent heat has subsided. The young plants that are pricked-out should also be plunged in the bed. Many persons follow the same practice in heated structures with plants 3 or 4 feet removed from the glass, and the result is that they become drawn. Our plan is to sow the seeds in bottom heat, and as soon as they vegetate to place the pots on a shelf within a foot of the glass. In this position the seed-leaves are firmer and the stem shorter and stouter. As soon as the seed-leaves are freely developed the plants are potted-off singly, the stem being covered almost quite up to the leaves during the operation of potting. After this they are again placed on the shelf near the glass.

GREENHOUSE AND CONSERVATORY.

When outside operations cannot be performed either with satisfaction to the employer or justice to the workman, there is generally plenty to do indoors. Washing scale and the filth made by it from Orange trees, Camellias, &c. We had much trouble with a large plant of Lapageria rosea in the stove. It became infested with bug, but was thoroughly cleansed and placed in the greenhouse, where the plant soon covered a large wood trellis; and here, though the house was open night and day for six months, the bug increased so much that the trellis had to be destroyed, and one of wire substituted. As the insect has but little shelter now, it can be kept under by syringing the plant every day when it is in full growth.

Put in cuttings of Tree Carnations. The small side growths from the main stem strike better than the stronger ones. Gross main growths will take a long time to form roots, and some of the difficult sorts refuse to root at all. The cuttings strike best in loam and leaf mould with a little sand added, and a thin layer of sand should be placed on the surface of the pot, plunge in bottom heat, and place a square of glass over the cuttings; it will rest on the ends of the labels, and is better than enclosing the cuttings in a handlight. The cuttings will not damp-off if the house is kept up to say 55°.

Removed successions of Roses, Hyacinths, Tulips, Lily of the Valley, Hoteia japonica, Deutzia gracilis, Dielytra spectabilis and other plants to the forcing houses. We find the Lily of the Valley succeed best when the pots are plunged in a gentle bottom heat. When the temperature of the house is rather high to begin with, the flowers of the Lily are thrown up before the leaves, whereas when the roots are in a higher temperature than the house this does not occur. No time should now be lost in tying and training all specimen hardwooded plants; if this is delayed many of the best buds, which are usually the most prominent, are broken off.

FLOWER GARDEN.

With the thermometer falling several degrees below the freezing point, and rising but little above it by day, tender plants put out in cold frames have not had a fair chance, yet they do not show any signs of distress. They are well covered at night. Cuttings that have been recently struck are removed from warmer houses to the heated lean-to pits. Florist varieties of Carnations have not had a good time of it; they do not suffer from cold, but damp and cold together sometimes cause the leaves to become spotted with a brown fungoid growth. These leaves must be cut off, or the plants are much injured. A few of the more tender varieties have suffered from this fungus. We do not know anything that will stop its progress. No rain should be allowed to fall on the plants late in autumn or through the winter months.

Pruned one portion of the Roses before digging the borders. The usual advice given in pruning Roses is to cut the weakest growers back very close, those that make medium growths not quite so closely, and to leave the strongest growths the longest. The shoots ought to be well thinned-out, and the growths to be cut well back, especially the Hybrid Perpetual sorts.—J. Douglas.

PROVINCIAL HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

TRADE CATALOGUES RECEIVED.

G. Yates, 29, Little Underbank, Stockport.—*Descriptive Catalogue of Seeds.*

Smith & Simmons, 36, Howard Street, St. Enoch Square, Glasgow.—*Cultural Guide and Seed Catalogue.*

Stuart & Mein, Wood Market, Kelso.—*General Catalogue of Seeds.*

J. Biddles & Co., Loughborough.—*Illustrated Catalogue of Seeds on Penny-packet System.*

P. Pennell & Sons, Lincoln.—*Seeds and Selected Gladioli.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Books (*J. M. Pebmarch*).—The price of the "Cottage Gardeners' Dictionary is 6*s.* 6*d.*, by post 7*s.* 2*d.* The names are accepted.

Garden Plans (*Delta*).—The book is reprinting, and will be soon published. It contains exactly what you need.

Grasses for Lawn and Pasture (*Mrs. D. L.*).—We recommend you to purchase "Laying-down Land to Permanent Pasture, &c.," by M. S. Sutton, F.R.H.S, &c. It is published by Messrs. Longman, and the price is only one shilling. It contains not only information relative to Grasses for all soils, but portraits of them, a geological map, &c.

Treatment of Vines in Pots (*A Novice*).—Allow only one growth from each spur, and when the shoots have grown enough pinch the point out two

leaves beyond the bunch. It will require a large supply of water when it has made strong growth. Water must be applied carefully at present, but the Vine must not suffer. We do not syringe our Vines after the buds are started, but a moist atmosphere is essential to healthy growth.

Wall-tree Protection (*Bill Bob*).—The blossom buds on our wall facing west are not sufficiently advanced to be injured by frost. They may be kept back by shading the trees with some protecting material in sunshiny days. The shading should only be used when the sun shines on the wall. It would not be desirable to keep the trees, as you suggest, in the dark. As soon as the flowers show signs of opening, the canvas could be used to protect the trees from frost at night, rolling it up in the daytime. Louise Bonne of Jersey is a free-fruiting variety.

Lime for Clayey Soil (*T. N.*).—You will not render it friable so as to be good garden soil unless you pare and burn the top spit of the whole plot, the ashes dug-in and the manures you name applied at the same time. Lime at the rate of one hundred bushels per acre would not be too much for such a clayey soil.

Dressing for American Blight (*K.*).—Spirits of petroleum applied with a brush to the parts infested will destroy it, or the whole tree may be done over with it, omitting, however, the buds; or boiled linseed oil applied cold with a brush will answer, keeping it from the buds, especially after they have begun to swell. Another cheaper and thoroughly efficacious remedy is to mix with a pint of gas tar a pint of dry powdered clay. Form the whole into a paste by adding by degrees a gallon of warm soft water. Apply with a brush to the parts infested, and, in fact, the whole tree except the buds; also bare the roots and examine them, as this pest descends and feeds upon them in winter. The composition should be thoroughly brushed into the crevices and angles. Apply the dressing warm, yet not over 120°.

Cowslips for Meadow (*K*).—The best plan would be to sow it with seed, which may be had of any principal London or provincial seedsman, and for a large quantity a special price would be quoted. A pound of seed distributed evenly over the field in March or early in April would give you a nice sprinkling of these pretty plants. You may, however, have some this year by removing the plants just when they are beginning to grow. Take up with some soil about an inch from the plant all round, and about 2 inches deep, and replant in your pasture. The work is best done with a knife.

Earthenware Pipes for Heating (*Wm. White*).—Glazed earthenware pipes have been used for heating by hot water, the joints being first stopped with tarred rope rammed-in tightly, yet taking care not to burst the sockets, and then make good with Portland cement. They are, however, liable to breakage, and are bad radiators of heat. Cast-iron water pipes are better, and not very much more costly. The others have answered satisfactorily, having an iron pipe for joining to the boiler.

Cutting Seed Potatoes (*J. C. B.*).—Nothing is gained by cutting into very small pieces, and we should not cut them more than to have each set about 1 oz. weight. You may, however, cut each Potato into as many sets as the Potatoes have eyes, reserving a portion of tuber to each, and then rub them in quicklime. Very large crops are had by the cutting to single eyes, but for general crop it is not to be advised; for your purpose we should advise the single sets.

Seakale Planting (*F. E.*).—Your bed 7 feet wide will contain three rows of plants, you blanching them on the ground. Stretch a line along the centre of the bed, and put in three plants in a triangle, allowing 4 inches between the crowns, and these triangles of plants should be 2 feet apart, and 2 feet from the centre row on each side. These can readily be covered with pots for forcing and blanching. The plants are best one year old.

Connover's Colossal Asparagus (*Idem*).—It is a good kind and large, fully as good, if not superior, to the Giant.

Early and Late Strawberries (*Idem*).—*Early:* Black Prince, Early Prolific, Sir Joseph Paxton, Vicomtesse Hericart de Thury, Keens' Seedling. *Late:* President, Dr. Hogg, Cockscomb, Hélène Gloede, and Anna de Rothschild.

Dahlias (*W. R. C.*).—The colours of the Dahlias are—Arbitrator, fawn, suffused purple, yellow at base; James Cocker, purple; Leah, golden yellow, tinted purple; Earl of Radnor, plum; William Newman, not known; William Lund, crimson maroon; John Standish, bright red; Julia Davis, yellow; Miss Turner, white, rosy tip; Maid of Essex, pale ground, tipped purplish rose; and Lady Gladys Herbert, white edged crimson. As to arranging them in a border we should have them in order as follows:—Maid of Essex, Julia Davis, Earl of Radnor, Miss Turner, James Cocker, Lady Gladys Herbert, John Standish, Leah, and William Lund. If you cannot find out what William Newman is, then have it, with Arbitrator next, or perhaps you can improve upon this arrangement.

White Bedding Plant with Dell's Beet (*An Amateur*).—The best of all is the one you have discarded—viz., Centaurea candidissima. The next best is Cineraria maritima raised from cuttings. If the Cineraria grows too tall it may be kept low by stopping. Chilian Beet is of no use, and white Stocks equally unsuitable. Soil growing Beet will grow Centaurea well.

Cerastium Propagation (*Idem*).—The beds edged with this and grown too large and weedy should be taken up with about 3 inches of soil and laid on one side. The ground should then be thoroughly forked over, breaking it up fine, and removing every particle of root of the Cerastium and other weeds. After this give a good dressing of fresh soil, and manure or leaf soil, and divide the Cerastium; put it in, each single stem with its root (an inch or two) about 3 inches apart every way, and 3 inches less each side than you wish the edging to be. Do this in March, and cut off the tops about an inch above the ground, watering if the weather be dry.

Melon for Cold Garden Frame (*Idem*).—Any Melon you may sow in a frame in May ought to have a little bottom heat to give the plants a start to bring them up quickly, well rooted and growing, and the seed should be sown early in the month. With no heat except from the sun you may ripen Little Heath Melon successfully; but Meredith's Hybrid Cashmere will not do well in such a situation unless the season be unusually hot.

Melons in Frame (*F. J.*).—The space you have at command will answer admirably for soil for Melons, which should be strong loam moderately enriched and firm. Little Heath would suit, it being raised in a frame in gentle heat, and put out when having three leaves. Train the vine—one from each plant, planted 2 feet apart—at about a foot distance from the glass, and do not stop it until it has reached to within a foot of the top, then take out its point. You will have side shoots; stop these one joint beyond the fruit. Impregnate the flowers, keeping a rather dry atmosphere when in flower and until they begin to swell, then keep more moist and water freely until the fruit is full-sized, then diminish the supply. Keep dry when ripening. Allow four fruit to a plant. Weak liquid manure may be given after the fruit commences swelling. Tomatoes would not succeed in 10-inch pots in the open—at least not well; but if warm they may swell the fruit to fair size, and they will ripen in a warm room. Lay the seeds flat.

Learning Drawing, &c. (*W. A.*).—In every suburb of London are night schools where you could obtain the instruction you desire. The other questions will be answered next week.

Gathering Comte de Lamy Pear (*G. C.*).—Gather the fruit as soon as it will part from the spray easily if lifted a little above a horizontal position. It is ripe in the course of October usually.

Arbor Vitæ Trees Dying (*R. T.*).—The trees by your description we should say had been cut by easterly winds rather than by blight or dryness of soil. They may recover, but it is rarely that they do. Remove the soil around the trees as deep as the roots and as far as the branches extended, and replace with a compost of turfy loam chopped-up fine, a third of leaf soil, and a fourth of well-rotted manure, well mixed, giving a thorough soaking of water in early April and again in May.

Improving Patchy Lawn (*R. B.*).—Give a thorough scratching with an iron rake in March, and a top-dressing of rich compost with an eighth part of lime incorporated, failing this a dressing of wet rotted manure. Early in April rake well, clearing off any rough portion of compost, and with an early prospect of rain sow over it Cynosurus cristatus, 7 lbs.; Festuca durinscula, 4lbs.; Festuca tenuifolia, 1lb.; Poa nemoralis sempervirens, 3lbs.; Poa trivialis, 2lbs.; Trifolium repens, 6 lbs.; and T. minus, 2lbs., in mixture for one acre. Roll well after sowing. Do not cut very close for a time after sowing—not until the growth is good, but keep well rolled.

Peach Trees Gumming (*F. Johns*).—Gumming arises principally in trees under glass from the looseness of the soil with too much richness, which causes a free sappy growth and long-jointed wood, but it not unfrequently results from too close tying of the branches and shoots to the wires. The remedy in the first case is to prune but little and to water moderately, making the soil firm as possible, so as to induce slow growth and short-jointed wood; and the other is to tie loosely, affording space for the shoots to swell. To prevent abrasion it is well to have a ligature of the tying material between the wire and shoot. Nothing will stop the gumming after it commences to issue, but judicious treatment will generally prevent it.

Pteris tricolor from Spores (*H. N.*).—Half fill a pot with crocks, and over this place rough sandy peat, filling to the rim; finish with about an inch thickness of sifted peat, with a fourth of silver sand intermixed, pressing firmly. Water well, and let stand to soak-in for a few hours, then water again and again. After the third watering brush the spores of the frond on to the surface, distributing equally, and cover with a bell-glass just fitting within the rim of the pot and resting on the soil. Place in a warm house in a shaded and moist position; stand the pot in a saucer, which is always to be kept full of water. No water will be needed on the surface, but it must be kept constantly moist. When the young plants appear, which will take some time, tilt the glass a little on one side at night, keeping close by day, increasing the opening as the plants advance in growth, removing it gradually after the plants throw-up fronds. Guano is not kept by us in time as formerly.

Inarching Muscat on Black Alicante (*A Constant Reader*).—The operation may be satisfactorily performed, but both do well on their own roots, and as a late-hanging Grape, Black Alicante is the better of the two. We have seen Grapes of both kinds upon the same Vine, the lower half Muscat of Alexandria, and the upper half Black Alicante. What is the variety of Bougainvillea you have in a pot in the stove? Not knowing the kind, we might advise, but advise wrongly.

Manuring Meadow (*D. D.*).—Distribute the horse droppings evenly next month, and break small, or bush-harrow, after rain; and at the end of March or beginning of April, but only in moist weather, dress with phosphate guano at the rate of 2 to 3 cwt. per acre.

Draining Gravelled Sweep (*F. J. C.*).—Stone drains, or, what would be better, drain pipes or tiles, 2-inch being large enough, laid across your gravel, nowhere less than 15 inches deep, as you will have the pressure of carriages. These 9 feet apart, and filled-up level with clay and stones so that the water will pass off by the stones to the drains, will give you, we think, freedom from surface water.

Levelling Ridges—Heading Trees for Grafting (*W. J. J.*).—The ground ought to be forked over thoroughly in dry or frosty weather. It will not do to level with a rake, it would sink unevenly. Cut off the heads only a few days before grafting—a week at most. Red-skin Flourball Potato is at best a watery kind. They are best steamed with their skins, but baking is a preferable mode of cooking.

Climbers for Roof of Fernery (*Agapanthus*).—Your house will only be suitable for greenhouse climbers. The most suitable would be Lapageria rosea and L. alba, Tacsonia Van Volxemi, Bignonia jasminoides floribunda, Cistus antarcticus, Cobœa scandens variegata, Habrothamnus fascicularis, Mandevilla suaveolens, and Passiflora Comte Nesselrode. Unless your house be large the Tacsonia and Passiflora would be sufficient for the roof-covering, as they will cover a large extent of surface, but we should also have the Lapagerias. If you have any bare wall that you wish to cover, Ficus repens would do so admirably.

Climbers for North Wall—Old Asparagus Transplanting—Fig Tree Full of Wood (*Winton*).—For the north wall besides Ivy Cotoneaster microphylla, but it will not cling without nailing, and we only know two others that will—viz., Ampelopsis Veitchii and A. hederacea, both deciduous and pretty, but not equal to Ivy, the finest of all green or variegated leaf-covering for a wall. Asparagus ten years old is not worth transplanting. Younger plants would do better and be more enduring. Thin out the long bare branches of the Fig tree at the close of April, or when it is beginning to grow. Cut these as near the base of the tree as you can; but whilst seeking to prevent overcrowding, cut away as little young wood as possible, for the more of that removed the more will there be produced afterwards, and the more growth the less fruit.

Plants for Rockwork (*W. H. S.*).—In the sunny parts or slightly shaded, Sempervivums arachnoideum, californicum, globiferum, and montanum; Sedums acre, atropurpureum, anglicum, glaucum, Nevi, kamtschaticum, pallidum roseum, and Wightmannianum; Saxifragas affinis, Aizoon, ceratophylla, joniperiana, oppositifolia, palmata, pectinata, umbrosa elegantissima Ferns in shade—Allosorus crispus, Asplenium adiantum-nigrum, A. trichomanes, A. viride, Athyrium corymbiferum, Blechnum spicant, Cystopteris fragilis, Lastrea Filix-mas cristata, Lomaria alpina, Polypodium vulgare cambricum,

Polystichum angulare proliferum, Scolopendrium vulgare, vars. corymbiferum and crispum.

Plants in Tubs for Lawn (*Idem*).—Yucca recurva is very graceful and good, and so is Laurustinus kept in neat form by cutting after flowering. Sweet Bay is also very handsome.

Pruning Roses (*Idem*).—Cut them at once to three or four eyes, the strongest least, and the weak growers cut-in more closely—to two eyes if the wood be very small.

Colorado Potato Beetle (*Amicus*).—We have not occupied any space with notes on this insect, because there is little more chance of its being introduced into this country from America than there is of its rattlesnake. It infests the haulm of the plant, and until the haulm is imported we shall probably remain unattacked, for although the larvæ descend into the earth, this is specially removed from all imported Potatoes.

Roses Louis Odier and Admirable (*Kittie*).—Louis Odier is a Bourbon, or rather a hybrid Bourbon with Noisette blood in it. It is still to be found in many of the Rose catalogues of the larger firms. We do not remember Admirable. The Sedum will do for carpet bedding, but the colour is not pronounced enough, and it is difficult to say what species it is from the small specimen enclosed. It is not too late to plant Manetti stocks, as the season is backward and nurserymen may still have a supply. We do not recommend budding on old overgrown stocks, but they may be kept to get cuttings from in the autumn.

Rose Moss de Meaux (*Hamlet*).—We cannot, we fear, aid you to obtain the Moss variety of the old Rose de Meaux. Can any of our correspondents and readers help the Prince of Denmark?

Lime, Salt, and Soot as a Manure (*Subscriber, Wolverhampton*).—One bushel of salt, one bushel of soot, and two bushels of lime are good proportions. Double those quantities will not be too much for 64 square yards.

Insects (*West Cumberland*).—The very minute white insects sent in damp earth (and asserted to be attacking and destroying the roots of various vegetables, Cabbage, Broccoli, and Brussels Sprouts which have stood over the winter, the roots of which are now swarming with these insects and in a state of decay), are one of the smallest known species of Thysanura, or Springtails, named Lipura ambulans, *Burm.* (Podura terrestris nivea of De Geer, &c.). They feed on decaying, not on healthy, vegetable matter. Your plants must have been injured by some other cause, possibly the severe cold, and thus become liable to the attacks of these little creatures. Your ground, too, probably wants thoroughly cleansing.—I. O. W.

Names of Fruits (*S.*).—The best specimen is Josephine de Malines, and the other Beurré d'Aremberg. We have not heard of Tobolsk Rhubarb for some years, but if you get Linnæus you will have an improvement on it.

Names of Plants (*T. W. C.*).—We cannot name plants from leaves only, we require a flower as well. (*Mrs. Carlisle*).—Garrya elliptica. The points of the leaves have been frostbitten. In our twenty-second volume is a drawing and many relative particulars.

POULTRY, BEE, AND PIGEON CHRONICLE.

THE EXHIBITION DORKING.—No. 9.

BY T. C. BURNELL.

Deformities and Diseases.—Prize fowls, to a certain extent, are reared in an artificial manner; the result is that deformities and diseases are more frequently found in them than in hardily-reared farmyard stock, though the latter are often thought to be more perfect than they really are. Not many farmyard fowls would stand being scanned by a critical eye, while, from what I can find out from farmers, they lose very nearly as many fowls from death and disease as we do among our own more highly reared stock. Anyone thinking of becoming an exhibitor will do well to make himself acquainted with the most common defects, so that he may not be taken-in when buying, nor waste entry money in sending out birds which he ought not to expect to win.

A Crooked Breast can be easily found out by passing the hand along the breast bone. If the bone is badly curved or indented the specimen should be rejected, as the defect is often hereditary, and will nearly always prevent such a bird from winning in the show pen.

Crooked Back, though sometimes apparent, can often only be ascertained by handling. The best way to proceed is to allow the weight of the bird's body to rest on one hand with the legs hanging down, while the other hand is passed down the back. If the spinal column rises in the middle it is called *hump-back;* if the spine is twisted, *wry back;* while if a lump is found on one side of the body higher than the other, the *hip bone projects.* The latter deformity often causes the tail to be held on one side, called *wry tail;* but this latter will in a young bird sometimes proceed from weakness and inability to hold the tail upright, but it should always be regarded with suspicion. A *squirrel tail* is when the tail is carried right over the back and almost touching the head. The latter is a great eyesore, and as well as the preceding malformations is most surely hereditary.

Bumble Foot is an enlargement or inflammation of the feet or toes. It is not peculiar to Dorkings, but is found in all large breeds, and I have seen several cases of it in the yards of one of the largest and most successful Brahma breeders in the south of England. Sometimes it occurs owing to a thorn or stone being driven into the sole of the foot and occasioning inflammation; but these cases are rare, and I am convinced it is generally an hereditary complaint, like gout in the human subject, and the only way to get rid of it is to ruthlessly blot out every specimen diseased this way, or at least not to breed from them. My old Dorking cock, cup at Birmingham and second at Crystal Palace in 1873, up to his death at nearly four years old, never showed the least trace of bumble foot, nor have I ever found it in any of his chickens; while, on the other hand, a fine bird which I bought cheap to breed from, thinking that a bumble foot would be no detriment for the purpose, threw chickens which showed corns on their *upper* toes when many of the birds were not six months old. The mischief generally begins by a corn growing in the pad of the sole of the foot, and this often proceeds no further. To prevent accidents though, it will be better to pick this out with a blunt penknife, after first soaking the foot in warm water. Occasionally a little blood may appear, when it will be better to apply lunar caustic to the hole, as is frequently done to stop the bleeding from a leech bite. There will be far less chance of blood flowing if the operation be performed in the moulting season, when the blood flows principally into the newly forming feathers. If a toe should become enlarged from any cause, accidental or otherwise, the swelling may be reduced, if not of too long standing, by the daily application of tincture of iodine with a camel's-hair brush.

Cramp occasionally occurs in damp yards. The sufferer should be placed alone in a dry house or pen, and be bedded down in hay or straw, till he recovers the use of his legs. I do not believe that any physic will do good, and patience is all that is required.

Diarrhœa is occasionally troublesome; it is caused by some irritating substance lodging in the intestine. A large tablespoonful of castor oil is the best remedy, as that will remove the evil. With little chickens a meal or two of boiled rice sprinkled with powdered chalk will prove sufficient in most cases; or small pills may be made up of prepared chalk and chlorodyne, only using sufficient of the latter to consolidate the chalk. Each chicken to receive one twice a-day. This is troublesome, but those who will not endure trouble will not succeed in chicken-rearing.

Gapes.—Little chickens often fall victims to this disease. A small and tenacious worm is developed in the windpipe, which the chicken endeavours to dislodge by repeatedly gaping or opening the mouth, and this symptom gives the name to the disease. A simple remedy is to administer a small pill of pure camphor to each chicken daily. The best preventive is never to allow young chickens to drink stale or impure water.

Relaxed Crop cannot be cured by any medicine, unless perhaps when it first makes its appearance. It is a great eyesore, but when once established cannot be remedied, and so the only plan is to put up with it. If a fowl swallows any hard substance too large to pass into the gizzard, the proper course is to cut open the crop with a penknife and remove the offending matter; the wound should be made no larger than necessary, will bleed very little, and will rapidly heal. I consider slack crop to be hereditary, and by repeatedly breeding from birds with this defect we could doubtless soon produce crops in fowls relatively as large as those of Pouter Pigeons.

Roup has rightly been called the scourge of the poultry yard. It generally proceeds in the first instance from a bad cold, but when a case is once established in a yard the germs of the disease are carried in the air and breath. The disease generally becomes apparent about the third day of infection, till then it is latent. Preliminary symptoms are sneezing and rattling in the throat, but occasionally one eye will become suddenly closed. When the running at the nose appears the disease is developed, but sometimes birds will run at the nostril without any previous warning. In every large poultry yard there should be a hospital pen in some out-of-the-way corner, where sick birds may be placed on the first appearance of illness, not only for their own comfort but to prevent contagion. If a roupy bird has once been placed in this pen it should afterwards be kept for roupy birds alone, and should be periodically limewashed. In bad cases of roup, especially in old birds, the eyes close, the head swells, the discharge from the nostril and mouth becomes thick and purulent, and death soon supervenes. If the affected bird is not very valuable it should be killed on the first appearance of the disease, and buried to save the other fowls, as the disease is very contagious. The discharge from the nostrils proceeds from the mucous membrane of the back of the mouth and throat, and the only other disease to which it is analogous is glanders in the horse, the latter being equally infectious. The moment the disease appears Condy's red fluid (principally permanganate of potash) should be added to the drinking water till it becomes of a pinky colour; and chloride of lime should be sprinkled about freely, and both precautions should be adopted through the whole yard. The only internal remedy which I have found effective—and I have tried them all—is a mixture of copaiba and oil of cubebs, in the proportion of four parts of the former to one of the latter, the dose to consist for a large fowl of twenty minims of the mixture made up in the form of a gelatine capsule; or copaiba capsules alone will do. A Dorking cock would require at least three capsules, or about sixty minims, in the day to effect a speedy cure. In addition to this, the bird's throat,

month, eyes, and nostrils should be sponged out daily with a strong solution of Condy's fluid, to correct the fetor of the discharge and to promote more healthy action. I have not known the above remedies to fail, and may claim some little experience, as last autumn I bought ten old farmyard fowls purposely to experiment on. I shut them up in an old wood house at a cottager's with a bird in the most advanced state of roup, her eyes being nearly closed, and the discharge from her nostrils most offensive. They had no water to drink, but moist meal twice a-day, and on the fourth day eight out of the ten had a running at the nose, and the others soon followed, and several of them rapidly became worse. I commenced the treatment above recommended on the eighth day, and before a week was over the whole were cured, including the hen which introduced the disease. The shed where these birds were confined was thatched at top but open at the sides, and consequently the foul air blew away. I think this a better plan than shutting the birds up in a close stuffy pen.

Shell-less Eggs with Dorkings are invariably caused by the hens being too fat. Starve the birds for a day, and then feed them principally on vegetable food to reduce the system.

For all slight indispositions I give a large table-spoonful of castor oil. Fowls will stand as large a dose of aperient medicine as a human being, and the reason why medicine is not generally effective with them is that sufficient is not given.

Zinc ointment is very useful for wounds or cuts.

CUPS AT THE OXFORD SHOW.

An article in this Journal (page 128) signed "An Exhibitor Misled" is calculated to mislead your readers as to the quality and value of the cups awarded at the late Oxford Show.

The cup in question and one other in the Game classes were presented by two of the patrons of the Show, and were advertised in the schedule and reprinted in the catalogue, with the other cups, as a silver cup value three guineas. The week following the close of the Show I gave a list of the successful exhibitors for the presentation cups to the silversmith, who informed me that the donor of the cup for fancy Ducks had personally chosen a handsome silver-plated jug value £3 15*s.* (twelve shillings in excess of the prize offered), and had ordered it be engraved. It will be seen from this that we had no choice in the matter—to use a homely phrase, "we could not look a gift horse in the mouth." On the 30th of last month I received a note from the exhibitor requesting the name and address of the silversmith who supplied the jug, as he was informed it was a plated article. I gave him the information, at the same time describing to him why his prize was not silver.

In answer to what course "An Exhibitor Misled" should adopt, I think it would have been best to have written to me again, stating his requirement; and as we were unintentionally in error in publishing that this cup was silver, I have no doubt we should have settled the matter to his satisfaction. With the above exceptions all other cups were silver, and for which we paid full value. The bill I beg to enclose for your inspection.—Joseph King, *Hon. Sec.*

[The silversmith's receipts are for silver cups.—Eds.]

REPORTS ON POULTRY.

As I am myself an exhibitor, though not of long standing, possibly some may say that I am merely anxious to appear in print, and am not sufficiently acquainted with my subject to authorise me in venturing an opinion upon it. In answer to this objection I can only say that all I would aim at is to have justice shown to each and every poultry exhibitor, and this, I think, can scarcely be looked for so long as a reporter be at the same time an exhibitor.

I have no wish to be offensive or personal in my remarks to any single reporter, believing as I most sincerely do that they try to do their duty and give an unbiased opinion, but what I think is that too much is asked of them—of human nature. I would say, Is not the old proverb, "Every mother considers her own crow the blackest," fairly applicable to reporters who are at the same time exhibitors? for are they not naturally disposed to consider their own birds superior to those of anyone else? and feeling in their own hearts convinced of this fact, they report accordingly. How often in the report of a poultry show does one read, "We consider the judging very indifferent;" "We cannot understand how such and such a bird came to be placed first;" "We think the prize ought to have fallen to this one or that one;" "We think pen 30 (Smith) ought to have had first prize;" "We could not help admiring pen 306 (Smith), and pen 23 (Smith) we consider as good as any in the show, the bird superb," &c., *ad infinitum.* The outside public or those who are not behind the scenes, and others who cannot afford to go to many shows, but who strive hard to add a little to limited income through rearing poultry, are obliged to depend upon the reports upon the different shows which they read in the papers, and are not, of course, aware that the reporter is very possibly the owner of the very bird he praises and brings to the fore, while other good birds are passed by without comment. Now, if poultry shows are to flourish, and people are to continue either for profit or pleasure to exhibit poultry, they must have confidence in those whose duty it is to report on their birds. And it is also my belief that editors have a great deal of power in their hands, and exhibitors would experience ten times the pleasure and confidence in exhibiting which they do were they convinced that unfair and partial judgments and deceptions of all kinds were exposed in the columns of that paper. If I might be allowed I would suggest that reporters should either be—

First, Gentlemen who had once been poultry fanciers, but no longer exhibitors.

Second, That the judge himself should write the reports. Could this be managed fanciers would be better able to know what style or class of bird the judges preferred.

Third, Gentlemen who are still exhibitors, provided they do not exhibit at the same show they report on, or if they do their names should be attached to the report.

Before closing this letter I should like to draw your attention to the annoyance caused to secretaries and exhibitors by the want of some good practical method of fastening on the labels and fastening the hampers. We occasionally hear of birds being removed from hampers altogether, or taken out for the purpose of disfiguring them by plucking their tails or removing their leg-feathering. It would be a great boon to both secretaries and fanciers could some simple method be invented to prevent the possibility of these unpleasantnesses occurring. I am now working out a simple plan which, if it prove feasible, will put a stop to rascalities of the above-mentioned kind.—Gerald F. Talbot.

THE POULTRY-KEEPER.—No. 31.

PLUMAGE OF CUCKOO FOWLS.

The Cuckoo feather is so called on account of the resemblance in the colouring and arrangement of the tints to those which

Fig. 44.—Hen's Feather.

cover the bird of this name. The feathers are bluish black, more or less dark, softening by half tints on a white ground, and coming again at little intervals nearly equal, and because of the length of the feathers from the down, which is of a clear greyish blue as far as their ends.

RAILWAY LIABILITY FOR NON-DELIVERY OF FOWLS FOR EXHIBITION.

Warminster County Court, February 15th.—*Joseph Hinton v. Great Western Railway Company.*—This was an adjourned case from the last Court. The plaintiff claimed for damage sustained through defendants not conveying two cases of poultry in time for the Monmouth Poultry Show in October last. Plaintiff's claim consisted of entrance fees (6*s.*), railway carriage (8*s.*), and damage or deterioration of fowls, making up a total of £2. Mr. George Ashpole of Monmouth proved the non-delivery of the birds, and also said he judged the Polish class. There were only three pens. He opened the plaintiff's baskets, and examined the Polands. They would have taken first prize easily, and must have run close for the prize for the best pen in the Show.

The Company admitted that they received the fowls in time for the 10·48 A.M. train on 13th October, but contended that they could not have delivered them earlier than they did—viz., half-past twelve on the following day. Three points in defence were—1st, that it ought to have been stated the time Mr. Hinton

wished the fowls to be at Monmouth, and the object of sending them; 2nd, that no delay was caused by the defendants; 3rd, that plaintiff had not, in his correspondence or particulars, made any claim for deterioration, and could not now set up that claim. With regard to the first point the plaintiff stated, in reply to the Judge, that the two cases had printed labels addressed "The Secretary, Poultry Show, Monmouth." This, the Judge stated, using a little common sense as well as law, ought to have been sufficient intimation of the time and object. With regard to the second point, there were three routes from Warminster to Monmouth, one which the plaintiff had correctly marked out, one by Swindon and Gloucester, and one by Cardiff and Neath. The Judge requested that these routes might be marked out in the same way as the plaintiff had marked out the other route. Much time was then lost in the attempt to mark out the two routes. In one there was but slight difference in the time of arrival with that suggested by the plaintiff; but with the other, it was shown that the baskets would be taken from Portskewet *viâ* Cardiff and Neath to Monmouth, arriving there at 12 30 on the day of the Show. By this route the baskets were taken one hundred miles or more out of their way. The poultry had been judged, and plaintiff's birds, it was proved by Mr. Ashpole's evidence, were not removed from their hampers at all, and there remained more than fifty hours without water. The Judge ruled that this was against all commou sense, and that seeing the Company's traffic was increased largely by these exhibitions, and that they well knew birds despatched to them were valuable, they were bound to take the shortest route unless otherwise specified. It was suggested that the decision as to the route of parcels was left to the discretion of the guards. His Honour said this custom was a most foolish one, and was likely to lead to endless litigation. If the directors acted so, they must take the consequences of their servants' acts.

With regard to the third point, the Judge ruled, that although plaintiff had been without professional services in drawiog his particulars, they were, however, framed in general words as to entitle him to claim for deterioration, that being, in fact, a substituted claim for anticipated prizes.

His Honour, Mr. Gaillard, in delivering judgment, said he must allow the plaintiff the carriage and entry fees. He had greater difficulty in aettling the amount of damages; but as such a detention without food or water was very likely to prove injurious to the specimens, he considered that if he made the order for 30*s*., inclusive of the railway carriage and entry fees, it would meet the merits of the case. Judgment for 30*s*. with costs was accordingly given. Towards the end of the case a cock, apparently under the window of the Court, as if in anticipation of the verdict, commenced crowing vigorously. This caused considerable amusement, and perhaps by some was considered a favourable omen.—(*Warminster Herald.*)

THE MEALY POUTER.

I am sorry that I have been prevented from sooner acknowledging the manly avowal of Mr. Huie on the above. With Mr. Laurie I am delighted to see the Mealy elevated to the dignity of a standard bird. It was a necessity of his position in the late controversy, and had the public avowal only been made a little earlier Mr. Huie would have saved himself the "rub" at Kilmarnock Show, which I am glad to see was taken as it was given. No old custom ought to shackle the conviction of any judge, the qualifications for which office Mr. Huie so lucidly tabulated in a recent number; and though he is not the Pigeon fancy, he cannot forget that he is a representative member of it, and that it is perfectly competent for representatives to carry out reforms obviously desired by their constituents.

Mr. Huie's reasons are very comprehensive and well put. His second might be amended as follows:—"The Mealy in itself is a standard colour, not being produced by crossing colours." No founding could thus be made on his concession with regard to standard-marked Chequers, &c., which are confessedly cross-bred colours. Just one other rub with Mr. Huie in connection with this controversy.

Bearing in mind his definition of a Pouter, we cannot see how he can consistently exclude badly-marked standard colours from the class which we prefer to call the "Any other Pouter class," into which he admits Splashes. He may tell us to exhibit them with their demerits in the standard classes, which simply means keep them at home. Now, as the object of this class is to maintain the standard, these birds ought not to be so treated. Surely a standard-marked Blue can be more easily bred from a badly-marked Blue bred from Blues than from any cross whatever. The latter demands knowledge, experience, and patience, and young fanciers, though willing to grasp the results of others, will not attempt it for themselves. Take the probable case of two birds in a loft, to all appearance Blue Splashes; but one is a chance throw from Blues, and the other a cross from White. Is it not strange that the one can be shown and the other not? Besides, I would advise those who consider badly-marked birds of little value to go and try to purchase one good in the essential points from any of our noted breeders, and, failing a bargain, to note the birds he has paired-up for breeding.

Their admission into any class other than the standard would, of course, raise the question as to what are the disqualifications in the standard classes. The solution of this question, which appears perfectly possible, would excite much interest among Pouter fanciers, and I sincerely trust Mr. Huie will give us the benefit of his experience on the subject. To begin, I append a list of disqualifications gleaned from observatiou of the work of most of our best judges. It does not pretend to be complete, and may not be correct. I invite both completion and correction.

1. Radical faults.—*a*, Thin limb, or limb not covered to the toes; *b*, Limb so flagged as to hide shape and length.

2. Birds too dark.—*a*, Limbs body-coloured, splashed or not splashed with white; *b*, Total want of moon; *c*, Coloured flights; *d*, Chequer marks in body colour.

3. Birds too light.—*a*, Want of distinct band of body colour between moon and white of vent; *b*, Colour on back splashed with white; *c*, White in tail.

Passable faults more or less serious: Want of bib, ringneck, snip, want of one or both rose pinions, body-coloured feathers in moon, and white limb splashed with body colour.—D. McNaught, *Kilmaurs.*

THE PRESENT STATE OF THE PIGEON FANCY.

I agree so far with your correspondent of February 11th, that English Owls are a degenerate lot compared with Africans, but there is one property they have, not to be found as far as I know in any other fancy Pigeon—viz., colour, which will prevent them meeting with the summary disposal your correspondent suggests; I allude of course to the Powder Blue, one of the most striking and beautiful colours among fancy Pigeons. To produce this colour in conjunction with all the points to be found in the best white foreigners should be the aim of the Owl fancier. It will take a long time to do it; but in the meantime, while the native bird is being fined down, the Owl should have two classes at shows as at present, divided, not as now for Foreign and English, but first a class for the best Owls of whatever colour, and second for the best Powder Blues. I think I can detect of late the foreign element in winning natives, but at the same time the loss of powdering, a proof to my mind of the means used. The author of the "Treatise on Pigeons," inscribed to John Mayor, Esq, is the first to mention the Powder Blue in Owls. He says, "The Blue ones should have black bars across the wings, and the lighter they are in colour, particularly in the hackle, the more they are valued."

The Dragoon fancy seems in a curious state at present. I have always regarded it as a fancy unworthy of support, and have been astonished and disappointed to find that a breed absolutely and without dispute a bastard strain, should monopolise the attention of breeders to the exclusion of high-class and Toy Pigeons, and to such an extent that only lately as high as £30 have been given for a single bird of this breed.

Carriers are Black, Dun, and Blue. It should be the ambition of the stout-bird fancier to try what he can do now in Yellows, Reds, and Whites. The latter were fifteen years ago to be had very good, and some of the Yellow and Red Dragoons, as they are called, might be advantageously used as the foundation of a strain of Carriers of these colours.

The only true criterion to judge a fancy Pigeon by is to see a perfect specimen, if not in life then on paper, and consider if there is anything about it truly original and distinct or not. By such a standard the Dragoon will not stand; neither will the Short-faced Antwerp.—J. C. Lyell.

THE ENGLISH OWL PIGEON.

I am much obliged by "Bubo's" appreciative praise. It is always pleasant to be approved. He and I agree about the Barb, but I fear we do not agree about the English Owl. I could better do without the foreign Owl than our bird of long lineage, and which existed here in great beauty upwards of a hundred years ago. If the word degenerate is to be used, the African Owl is the one to which it might be applied. The English bird is a fine noble fellow, with a capital pair of wings of which he can make excellent use. He is to the African what the well-bred flying Tumbler is to the Almond. The crossbred ones are less apparent at our shows than they were. I fear the Powder Blue has been grievously injured by the cross. I would on no account discourage the exhibition of the English Owl. Bred true and fine he is a grand bird. Then my eye can wander on and see with pleasure the little Africans, appreciating their petite charms. Breeders, strive for the Powder Blue Owls. I wish "Bubo" every success with his little Africans, but wish as heartily English Owl breeders as great success with their birds.—Wiltshire Rector.

Poultry-yard Account-book. By Hugh Piper. Groombridge and Sons, Paternoster Row.—This is a very useful account-

book, for it enables to be easily recorded and referred to the eggs laid daily, the amount received for produce, eggs sold, fowls and chickens sold and the amount received, the value of feathers and manure, eggs, &c., fowls used in the household, amount of expenditure, fowls and eggs purchased for sitting, cost of food, rent, and labour; number of hens sat and dates of sitting, the number of eggs, number of chickens hatched, reared, &c.

ITALIAN OR LIGURIAN BEES.

The fashions are, as we all know, irresistible, happily only for the time pending the introduction of something new. Mr. Pettigrew, in his interesting article on Ligurian bees, has touched upon one of these fashions in the apiarian world. I am one who was smitten with the prevalent epidemic some ten years ago or more, and since then I have never been without the Ligurians (or, as they ought more correctly to be called, "Italian Alp bees") in my apiary, either pure or hybrids. I have them still, and although I believe within a radius of seven or eight miles nobody keeps them consciously, they are to be found in all directions, having no doubt escaped from my apiary in swarming seasons, and established themselves in those of my neighbours.

I quite hope with Mr. Pettigrew that we may have, in consequence of his appeal, some detailed results of the trial of these bees by persons in every part of the country who have had a lengthened experience of them. I will contribute my mite towards the desired result by narrating my own experience as far as it goes. I must say as far as it goes, because of late years I have not gone in for honey to any extent, owing to the small sale there is for it in our neighbourhood, and the trouble attending the manipulation of any large quantity. In former days, when I measured my honey by hundredweights, it was so far too much of a good thing that I have of late years kept down my stock to very moderate limits, and have been content with tens instead of hundreds of pounds; and this change in my aspirations was about synchronous with the establishment of the Italians in my apiary, so that I really am not qualified to speak in any very positive fashion as to the superiority of one race over the other in respect to the production of honey. I must say, however, that if there has been a difference it has, I think, been in favour of the Italians, which certainly have given me more honey than the old black bees, but this may have been accidental. At the same time I must add that the Italians have proved themselves extraordinarily prolific.

The breeding powers of the queens in my possession, particularly the hybrids, have been greatly in excess of anything I had ever experience of before; and this ought, by all the rules of bee management, to insure a good honey harvest wherever it is to be had. Indeed, I have found this fecundity quite a nuisance, as they have multiplied to such an extent in hives as to have occasioned an excess of swarming, and compelled me to try to check it by artificial means, to which I may attribute a good deal, probably, of my non-success of late years in harvesting honey. So far my experience agrees with the writer in the *New York Tribune*, who said "they were good breeders but poor honey-gatherers."

Mr. Pettigrew proposes to "test by a public trial or competition which sort of bees is the best." If this could be done with fairness and perfect impartiality in any one season it might be well to try it, but I am not sanguine as to any satisfactory results coming from it; for it is simply impossible to put two hives of bees into the race of competition, however apparently equal they may have been at starting, and predicate of them that they shall maintain their course on like terms to the end. The queen of one or the other will go her own independent way, and baffle by the eccentricity of her proceedings the most reasonably probable hopes of the trial-mongers.

What we want is the honestly recorded experience of bee-keepers in all parts of England, Scotland, and Ireland, giving in detail the results of their personal experience during the more or less considerable period of their acquaintance with the Ligurians. Surely we want no more to enable us to form a judgment! Hundreds of people are keeping or have been keeping them for years. We do not want the testimony of salesmen, but of those who have been buyers of the article in question.

So, apiarians of England, out with your facts, and tell us what you think of these foreigners; but let nobody venture an opinion who has not kept them at least five years. No less time is required to authorise a trustworthy judgment; and creditable to the *Journal of Horticulture* it will be to have contributed its quota to the fair settlement of this question.—B. & W.

OUR LETTER BOX.

Dorkings with Brahmas (*An Old Subscriber*).—The Brahma pullets being in the same yard with a Dorking cock and pullets would in no way interfere with the purity of the latter's progeny.

Eggs Soft-shelled (*E. S.*).—The hens may be too fat, or they have not a sufficient supply of calcareous diet. Lower diet and a heap of bricklayers' limy rubbish are the remedies.

Kendal Show.—Mr. Mashy informs us that No. 100 was not a hen, but a pullet hatched very late in 1874.

Incased Feather of Barb (*W. Hartley*).—The feather you sent us is called an incased feather. Some high-bred birds moult these frequently. The cause is delicacy of constitution. We had a most beautiful Scotch Fantail that moulted every one of her tail feathers in this way, and her tail looked like a bunch or fan of porcupine quills. The internal remedy is good food, gravel, salt, green food, change of diet, and warmth. The external cure is as follows:—Rub gently with your nail the top part of the case day after day, and the feather will come out; but only rub the dry part of the case—as soon as you reach what is soft or bloody stop. Then a few days after another bit of case will be dry. We have done this frequently, and got all the feathers of our Fan's tail free in this way. The worst plan is to draw the feather, for a weaker will succeed. If you can give your bird her freedom, flying and the sun and air will do wonders. The worst part of your Barb hen's disease is her softness and looseness of body feathers. This looks like feather-rot and consumption, of which there is not a positive cure; but a spoonful of cod-liver oil may do her good, given each day. Or a nicer plan is to give her the oil in capsules, which you can get of a first-class chemist.

Hives (*G. S.*).—Write to Messrs. Neighbour, Holborn, and tell them what you need.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. Feb.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 17	30.266	40.6	39.3	N.E.	39.3	44.8	35.1	53 8	33 2	0.018
Th. 18	30.221	36.5	35.3	N.E.	39.0	41.4	33.7	57.3	30.8	0.010
Fri. 19	30.166	32.1	31.9	E.	37.8	36.0	29.8	51.4	27.6	0.119
Sat. 20	30.004	30.9	30.7	N.E.	37.0	33.5	28.7	43.5	29.7	0.015
Sun. 21	30.110	34.0	33.1	E.	35.8	40.2	30.2	55.7	30.2	0.018
Mo. 22	30.168	33.0	32.1	N.E.	36.0	40.3	28.0	54.6	26.4	—
Tu. 23	29.865	31.3	31.2	N.	35 4	38 9	29.5	53.0	28.1	—
Means	30.114	34.1	33.4		37.2	39.3	30.7	65.6	29 4	0.178

REMARKS.

17th.—Rain early; fine forenoon and till 3 P.M., after which time there were frequent showers.

18th.—Fair in early morning; very fine forenoon; but rain in the afternoon, and very heavy hail shower about 6 P.M.; fair at night.

19th.—Fair, but very cold, snowing heavily between 12 and 1 P.M., and continuing to do so more or less all day.

20th.—Snowing fast in the forenoon and early afternoon; fair evening and night.

21st.—Fair all day, at times very bright, but the snow still on the ground, except where fully exposed to the sun.

22nd.—A bright sunny day, but the snow still lying unmelted.

23rd.—Fair and rather bright, but not nearly so much so as yesterday, still very cold, and the snow not yet gone.

Temperature rather lower than last week, except in sunshine, where very high readings were obtained, the sky having been more free from cloud than for some months, and the wind north-easterly.—G. J. Symons.

COVENT GARDEN MARKET.—February 24.

The markets are fairly supplied with late home-grown sorts of Apples, but Pears are nearly over. The best there is to be had now are Easter Beurré from the Continent and from California, the latter being of excellent quality. Vegetables are good and sufficient for the demand, importations from the Channel Islands and contiguous parts of France being a great help. Potatoes still show a considerable amount of disease, but there are plenty offered.

FRUIT.

	s.	d.		s.	d.		s.	d.		s.	d.
Apples	½ sieve	1	6 to	3	0	Mulberries	℔ lb.	0	0 to	0	0
Apricots	doz.	0	0	0	0	Nectarines	doz.	0	0	0	0
Cherries	℔ lb.	0	0	0	0	Oranges	℔ 100	8	0	12	0
Chestnuts	bushel	10	0	20	0	Peaches	doz.	0	0	0	0
Currants	½ sieve	0	0	0	0	Pears, kitchen	doz.	2	0	3	0
Black	do.	0	0	0	0	dessert	doz.	3	0	6	0
Figs	doz.	0	0	0	0	Pine Apples	lb.	2	0	6	0
Filberts	lb.	1	0	1	6	Plums	½ sieve	0	0	0	0
Cobs	lb.	1	6	2	0	Quinces	doz.	0	0	0	0
Gooseberries	quart	0	0	0	0	Raspberries	lb.	0	0	0	0
Grapes, hothouse	lb.	6	0	10	0	Strawberries	℔ lb.	0	0	0	0
Lemons	℔ 100	8	0	12	0	Walnuts	bushel	8	0	12	0
Melons	each	0	0	0	0	ditto	℔ 100	1	0	1	6

VEGETABLES.

	s.	d.		s.	d.		s.	d.		s.	d.
Artichokes	doz.	3	0 to	5	0	Leeks		0	3 to	0	0
Asparagus	℔ 100	6	0	10	0	Lettuce	doz.	1	0	2	0
French	per bundle	20	0	30	0	Mushrooms	pottle	0	9	2	0
Beans, Kidney	per 100	2	0	3	0	Mustard & Cress	punnet	0	2	0	0
Broad	bushel	0	0	0	0	Onions	bushel	3	0	5	0
Beet, Red	doz.	1	0	3	0	pickling	quart	0	3	0	0
Broccoli	bundle	0	9	1	3	Parsley per doz. bunches		4	0	6	0
Brussels Sprouts	½ sieve	3	0	4	0	Parsnips	doz.	0	9	1	0
Cabbage	doz.	1	6	2	6	Peas	quart	0	0	0	0
Carrots	bunch	0	6	0	8	Potatoes	bushel	2	6	5	0
Capsicums	℔ 100	0	0	0	0	Kidney	do.	3	0	5	3
Cauliflower	doz.	4	0	8	0	Radishes	doz. bunches	1	0	1	0
Celery	bundle	1	3	2	0	Rhubarb	bundle	1	0	1	6
Coleworts	doz. bunches	4	0	6	0	Salsafy	bundle	1	3	0	0
Cucumbers	each	2	0	3	0	Scorzonera	bundle	1	0	0	0
pickling	doz.	0	0	0	0	Sea-kale	basket	2	0	3	6
Endive	doz.	2	0	3	0	Shallots	lb.	0	3	0	6
Fennel	bunch	0	3	0	0	Spinach	bushel	0	0	4	0
Garlic	lb.	0	6	0	0	Tomatoes	doz.	0	0	0	0
Herbs	bunch	0	3	0	0	Turnips	bunch	0	6	0	0
Horseradish	bundle	0	0	4	0	Vegetable Marrows	doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	MARCH 4—10, 1875.	Average Temperature near London.			Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
4	Th	Royal Society at 8.30 P.M.	49.9	31.5	40.6	41 af 6	43 af 5	48 af 5	after.	26	11 54	63
5	F	Archæological Institution, 4 P.M.	48.9	31.8	40.3	39 6	45 5	14 6	29 2	27	11 41	64
6	S		48.6	32.2	40.4	36 6	47 5	34 6	57 3	28	11 27	65
7	Sun	4 Sunday in Lent.	49.1	32.4	40.7	34 6	48 5	49 6	24 5	○	11 12	66
8	M	Medical (Anniversary) at 8 P.M. [3. P.M.	49.1	31.5	40.3	32 6	50 5	2 7	51 6	1	10 57	67
9	Tu	Royal Horticultural Adjourned Annual Meeting at	49.2	31.1	40.1	30 6	52 5	15 7	19 8	2	10 42	68
10	W	Royal Literary Fund (Anniversary) at 3 P.M.	49.6	31.6	40.6	27 6	54 5	28 7	49 9	3	10 26	69

From observations taken near London during forty-three years, the average day temperature of the week is 49.1°; and its night temperature 31.7°.

PRUNING AND MANAGING OLD APPLE TREES.

THE appearance of many of the old Apple orchards in Kent often conveys to the observer that no great pains are taken with their management. At first sight they are suggestive of a careless mode of treatment, or, indeed, neglect, whereby the trees, which had originally been fine standards, by being left to themselves present nothing but a mass of shoots or branches apparently so overcrowded as to be of little use for fruit-bearing. Such trees, the observer might imagine, reflect no credit on the cultivator, and the probability is the looker-on, if in the habit of using the saw and knife, would like to show his skill in putting the trees in order. The surprise on seeing these old orchards so apparently neglected is the greater by the carefully tended crops of vegetables, &c., in the gardens contiguous, and consequently he will perhaps inquire why the Apple trees are allowed to get into such a wild and unsightly condition where everything else betokens that no trouble or expense is spared to render them all that could be desired. We should not, however, hastily conclude or unreasonably condemn, for inquiry into the matter will educe the fact that there are plenty of fruit-growers whose aim is to have trees clothed with this dense growth—growers, too, whose living depends upon the fruit they grow, and who in point of cultural information, as well as spirited enterprise, are not excelled by any other class in the kingdom.

Now these growers are able to give a reason why such trees are not pruned. I admit this reason may at the first fail to carry conviction with it, but yet in time the feeling will be forced on the mind of the inquirer that custom or prejudice is not the cause of what he thinks is the omission of necessary pruning.

By observing the practice of the neighbourhood and noting the results, and by taking evidence of the owners of these orchards, it is more than possible that he will eventually become a convert to the custom he first of all condemned, especially when he hears of the many examples of failures by those who thought they were going to reform a system they did not fully understand. Thus first impressions are not always correct.

Now to be more explicit, let us suppose a gardener from a midland county suddenly removed to a charge in Kent, and, in addition to his other duties, an orchard on grass be put under his care. This may consist of a mixed collection of Apple and Pear trees that are evidently past their best, but still large trees more or less overgrown with moss, and their tops a thicket of boughs, with comparatively few shoots of the previous year's growth of more than a couple of inches in length. Most likely the first impulse would be, if it be the winter season, for the ladder, saw, pruning hook, and knife to be all vigorously applied. The firstfruits of this effort would be a load or two of faggots, and a survey of them with some distant friend brings out the expression that the trees are in something like bearing condition. But the old smock-frocked native shakes his head dubiously, and repeats what he has before asserted—"It will never answer, master," and is even not disconcerted when there is a fair crop the first year, which often happens. But by-and-by it is found out that the old man's warnings have not been all in vain, for the trees seem to dwindle away, and the produce of them becomes indifferent. The trees after all are not made young again, but in many cases their dissolution has been hastened, and the whole affair ends in disappointment. This matter, which has been enacted over and over again, is worth examining more fully to consider the causes which lead to such a result.

Let us take the Apple, and inquire into its history. We find that, like ourselves, it has its allotted time, which also, like that of ourselves, is prolonged or shortened according to circumstances. It has its youthful and matured period as well as its old age. When it approaches the latter stage there is, probably, more analogy between it and ourselves than we often take into consideration; and who amongst us at that declining period would like to lose a limb? yet we unmercifully amputate the old tree. But old trees, like old humanity, much rather benefit by generous assistance in the shape of food or other requirements.

Stimulants given to the root, but these not to an extreme amount, yet sufficient to reanimate and create an additional growth, would be the rational way to treat the tree, and with that it is possible the duty of gentle, not vigorous, pruning might be permitted. The most likely way, however, to render those severe amputations unnecessary is to look over the trees more frequently and do a little at a time, and not allow them to get into that condition which seems to call for such severe measures. When trees become old it is the rule in this neighbourhood not to prune them at all, but when they seem no longer profitable to destroy them, and plant others. These are planted, if possible, on another site. If it be on grass, the orchard is renewed by degrees; but if on tillage, there is usually a clean sweep at once, and a new orchard placed elsewhere.

Now, in the above remarks on the impropriety of severely pruning old fruit trees, I am not putting forth any peculiar notion of my own. On the contrary, I confess having become, to a certain degree, an unwilling convert to the practice; for it is no easy matter to contest an opinion with those who have spent a long life in fruit-growing, and have arrived at such a conclusion, as almost everyone has by whom I am surrounded, many of them being extensive fruit-growers. One of the most strenuous opponents to pruning old trees told me he had upwards of twenty thousand bushels of Apples last year. His trees were pruned rather freely, being young, but after arriving at a certain stage pruning is discontinued altogether, unless it be the removal of some branch that interferes with the growth of something else, or in some way or other requires shortening. Beyond this little or no cutting takes place with the old trees during the last half-dozen or more years of their existence. Experience has shown, although the crop immediately following the

cutting may be pretty good, the result afterwards is rarely satisfactory, and in consequence is rarely adopted by experienced hands.

In mentioning this I expect to be met by the remark, "What unsightly-looking trees they must be!" I confess some really do assume that aspect, but it is not for long, as when such trees cease to bear fairly good crops of fruit they are destroyed, which is better than waiting for the recovery of an old worn-out tree. When we have the example of those whose living depends on making the most that can be made of the plot of ground they hold, we may be sure they are not likely to be far wrong. Possibly, however, it would be better for the grower for private consumption not to cut the whole down at once, but to leave some for immediate supply; and more especially we would recommend him not to prune all the trees too severely at once. If he takes the trouble to ascertain the quantity and quality of the fruit the unpruned and pruned trees respectively bear, say, for the first four years or more, he will then be able to form an opinion whether the views narrated are correct or not.

In closing this article I need hardly say that the bulk of Apples grown in this neighbourhood are on standard trees with stems sufficiently high for cattle to graze under their heads. These trees when planted are rarely cut until the following year, but are always tied to one or more stakes, the stakes being continued for some years, and each succeeding winter the trees are pruned, all the shoots being shortened, and attention paid to the intended shape of the head. This reduction of the head is the more necessary to enable the stem to strengthen, which it would not do if the head were allowed to take its full unmolested growth. In a general way it is about four years before the tree is fairly capable of being left alone, and if the ground be in grass a sort of cage or frame to keep off cattle is often used as a means of tying it to for a year or so longer; but some pruning is done every year for some time, after which it may receive a look-round every third year, and possibly at longer periods, until tokens of old age creep on, after which no further mutilation takes places. The tree is then supposed to be past all improvement that can be given to it in that way; but I may repeat here what I stated at the first—that it is still influenced by kind and generous treatment at the root, and a load of dung tells its tale in a far more efficacious way than by the use of the knife and saw.

A friend of mine, whose orchard is of considerable extent, old me that he often treats an unhealthy tree to a little manure, which is spread over the ground, and the treat is duly appreciated and becomes visible to all. Those, therefore, who have recently come into possession of an orchard of old unsightly trees had better consider well before they undertake any serious mutilation, while at the same time the wheelbarrow or dungcart may be safely put in force. The removal of the moss by which the trees may be covered may be fitly treated of in another chapter.—J. Robson.

RAISING GLOXINIAS FROM SEED.

Now is the time to sow Gloxinia seed, not that it will vegetate better or the seedlings grow more freely than at any other period of the year, but because plants that are raised now can be brought to a considerable size and in fine bloom within a period of six months; and by bringing them on in succession, selecting the strongest plants as each batch is taken from the seed pans, an abundance of fine flowers may be had from August till the end of the year. The cultural process is very simple.

Half-fill a pan with broken crocks, filling-up to within an inch of the rim with fine soil consisting half of silver sand and half of peat or very old leaf mould well mixed, press the soil gently, spread the dust-like seed carefully over the surface; put no soil upon it, but cover it with a sheet of glass laid upon the top of the pan. Place it in the lively temperature of a hothed or early vinery, and moisten the surface of the soil occasionally with tepid water. This must be done carefully so as not to disturb the seed, and the glass replaced till the plants form a leaf or two. If the pan is plunged in bottom heat it will, of course, accelerate the germination of the seed, but that is not indispensable.

When the plants are large enough to handle prick them singly into 2-inch pots in soil like that in the seed pan. Do not, however, attempt to pot the whole of them at once, a few rampant fellows always take the lead. These should form a first batch to be followed by relays of others as they gain size, thus forming a succession for the coming autumn. When the roots reach the sides of the small pots the plants are repotted into 4 or 5-inch pots, in which they produce their first flowers. The soil used for the second pots is of a much stronger nature, and consists of turfy loam, old manure, and sand in about equal proportions.

A shaded position, precisely such as the stage of a vinery affords, suits them admirably. Frequent syringings, a plentiful supply of water, and some guano water or other liquid manure when the flower buds become visible, comprise the remaining points of importance. Care should also be taken to afford each plant ample space for the full development of its beautiful foliage, which under the favourable treatment indicated attains an extraordinary size, quite concealing the pot and forming a noble mass of green, and when it is crowned with its twenty or thirty buds and open flowers we have an object of such great beauty as to be suitable for almost every purpose to which a pot plant can be applied.

I have now upwards of two hundred corms which were raised last year very much after the manner I have described. They are a very fine lot, many of them measuring 3 inches in diameter. In the seed pans there are probably as many more, nice plump corms about the size of a large pea, and admirably adapted for a late autumnal display.

The whole of them are from a single packet of seed; most of the flowers were good, and many of them were of such excellent form and colour as to afford an ample stock for future purposes.—Edward Luckhurst.

ROSES.

"M. H. B." will be in despair. We have had no Rose food for several Journals. It is said that Oxford is so learned because "so much learning is taken there and so little is brought away." This may be applied to rosarians. They are a learned body because they keep their learning to themselves! They seem to be of the same opinion as a crabbed old Latin author, whose words translated would say, "Learning is no good to you if you let others know what you know." This is ungenerous. The Egyptians are a hieroglyphic nation, and they represent an incommunicative person by a dark lantern, having light within but giving no light without!

I have but little light at present in the matter of Roses, but I will communicate something, which is at any rate better than nothing. A beggar once told me, upon my saying I would give him nothing, "There is no taste in that 'ere article, and you could not give me much less, sir."

I said in my last article that I had on trial on weak stocks Peach Blossom, Diana, and St. George, and that I hoped to be able next year to report favourably of them. I have five plants of Firebrand on Briars, which being planted last spring could not in such a torrid summer be expected to be sufficiently established to test the Rose. The blooms were good for the season. The colour is that of a red-hot coal without any shading at all. It is quite distinct and of cupped form. Pierre Seletsky is a much better Rose than "D., *Deal*," has allowed. It is a good grower, hardy, and with very smooth and very stiff petals—important points. Madame Lacharme has grown well, but the fierce sun burnt-up the first blooms before expansion, and it did not give a second series. I have the following novelties on strong Manetti stocks, or comparatively strong stocks, and they have withstood the severe winter admirably:—John Harrison, Gould Veitch, François Courtin, Olga Marix, Hortense Mignard, Madame Bucheter, Mdlle. Alexis Michaut, and Madame Nachury. Let us hope that we shall find among them a nugget or two! There are a good many blanks to a prize, but still it might take a rosarian half a lifetime to raise as good Rose as one of the worst sent out yearly.

People do not generally know how difficult it is to raise a Rose as good as the parents, or better than and distinct from the Roses which we already possess. It is not enough for a new Rose to be good unless it is better than and distinct from Roses in the same line of colour. I am sure we are much obliged to the foreign and English raisers for procuring for us such a beautiful lot of Roses as we possess, and I for one cannot bring myself to use such harsh terms as I have heard occasionally applied to them. The Roses (except the summer Roses and Tea Roses) that I have lately given a list of, may be seen here in full bloom from July 12th to 14th, in great beauty in my frontage, lawnage, and in three other gardens, lining every walk in double or treble lines of six per sort in alternation of colours, or in beds of twelve to twenty per sort,

which last mode is very effective. I thank the raisers from my heart. The Tea-scented Noisettes, a noble race, Maréchal Niel, Triomphe de Rennes, Gloire de Dijon, and Céline Forestier commence in May and never cease till severe frost stops them. The three last are the best, most abundant, and latest bloomers.—W. F. Radclyffe, *Okeford Fitzpaine*.

ROYAL HORTICULTURAL SOCIETY.

March 3rd.

Fruit Committee.—Henry Webb, Esq., in the chair. Mr. Sherratt, nurseryman, Knypersley, sent a large branch of Kumquat bearing fifty-six fruit. The tree from which this branch was taken is said to be the only specimen existing in this country. It is the Citrus japonica. Henry Webb, Esq., exhibited a dish of Mandarine Oranges grown at Cannes, the flavour of which was very excellent, and for which a letter of thanks was awarded. Charles Reily, Esq., The Priory, Tonbridge Wells, sent two fruit of Cayenne and one Queen Pines, which were considered very good fruit considering they were represented to have been grown under disadvantageous circumstances. Mr. A. Archer Moss, Chadwell Heath, Essex, sent a seedling Apple, which was not considered of sufficient merit. Dr. Hooker sent an enormous root of Batatas edulis, grown in Madeira, which weighed 15¾ lbs., and for which a letter of thanks was awarded. Mr. Pottle, gardener, Sudbourne Hall, Wickham Market, sent a vegetable called Cabbage Broccoli, which is used as a Cabbage during winter, and in spring throws out a number of Broccoli Sprouts. The Committee asked that it be exhibited again later in the season when the sprouts are developed. Mr. Ransley Tanton sent a seedling kidney Potato, called Premier, which was recommended to be grown at Chiswick. He also exhibited samples of tobacco paper and ground bones, both of which were very good.

Floral Committee.—R. B. Postans, Esq., in the chair. We have but very little to notice here, the only group of plants with any pretensions to a show being the Spiræas from Mr. H. B. Smith of the Ealing Dean Nurseries. These comprised two dozen forced plants of S. japonica from home-grown roots. They were healthy and good, and merited the vote of thanks which was awarded.

Mr. Green, Holmsdale Road, Reigate, exhibited a small plant of Masdevallia melanopus. This is a new species discovered by M. Roezl, and is diminutive, curious, and pretty. The plant is not more than 3 inches high, and has three spikes of bloom. The flowers are whitish with dark purple spots and singular yellow horns. This is a cool-house Orchid, the plant having been subjected to a temperature of 45°, and was in perfect health. It is interesting, and received a botanical commendation.

A nice well-bloomed plant of Cœlogyne conferta was sent by Mr. May, gardener to J. S. Bockett, Esq., Stamford Hill, and a vote of thanks given. A fine spike of Dendrobium nobile was sent by Mr. Stevens, gardener to G. Simpson, Esq., Wray Park, Reigate, and a vote of thanks awarded.

A small plant of Primula sinensis was brought by Mr. C. Hart, Beaufort House, Lee, having two distinct colours, both in leaf-stalk and flower. One half of the plant may be described as red, and the other half white. A pip of pure white was striking as being set in a truss of rosy pink blooms. The probability is that the peculiarity will not be constant and perpetuated by seed, as these plants are of a sportive character. It is not at all unlikely, however, that the plant as it grows larger will throw-up trusses of white as well as of coloured blooms, and is worthy of preservation.

SEAKALE POTS.

Can Seakale pots be dispensed with? They can, on condition that other appliances can be had. Twenty-five years ago I found in use boxes in the room of Seakale pots; they were rough three-quarter-inch boards nailed firmly together, 20 inches square inside measure and 15 inches deep; a square piece of board or slate formed the lid. The boxes had two coverings of gas tar, and were put away in a dry loft till wanted. After being used they should be cleaned, and every two years they should have a coat of tar, and then I cannot say how long they will last. I found them more convenient than pots, for, be as careful as we may, pots are broken. It may be said that wood rots too, but I used them for thirteen years and left them in good condition. I never knew what they cost, but that would not be a very serious item, as the wood was home-grown and the boxes home-made.

With such appliances pots can be dispensed with, but I know that all Seakale growers have not wood nor yet carpenters, and it is not easy to conceive the makeshifts some of our craft are driven to under pressing circumstances. Tea chests, firkins, bottomless boilers, and the like have been resorted to, to have Seakale in useable condition. I commenced my career in a market garden where, in the forcing of Seakale and Rhubarb, pots and boxes were dispensed with, and I saw as good Seakale grown then, which is forty years ago, without those aids as I have seen since with them. Instead of pots we used to procure sticks of the required length and insert one end in the ground, bend it over the crowns, and stick the other end in the ground. Five or six such sticks give the idea of a bee hive. A little dry litter placed round them before the fermenting material is applied keeps the Kale clean, and furnishes us with a useful substitute for a Seakale pot.—H.

ROYAL HORTICULTURAL SOCIETY.

Although we have abstained hitherto from expressing any opinion upon the present state of the Royal Horticultural Society, we have not been passive observers of what has been going on. The great difficulty we feel, in common with all true friends of the Society, is in coming to a clear perception of what ought to be done in the present crisis. The present agitation is merely a repetition of what has often taken place before, and is a contention between two parties—one the Non-horticultural, and the other the Horticultural. The former are the pleasure-seekers apart from horticulture, and the latter the pleasure-seekers in connection with horticulture.

It will naturally be supposed that those who derive pleasure from the pursuit of horticulture have the best claim to be heard in the councils of a horticultural society, and it is a contention for the establishment of this claim which has given rise to this as well as to former agitations. Those gentlemen on the present Council who took part in displacing the old Council, told the Fellows that the interests of the Society had been sacrificed to the Royal Commissioners, that its funds were diverted, and that by transferring the management to them it could be shown that the income of the Society was not only sufficient for all its requirements, but that a large surplus ought to be secured. Those who know anything of the present state of the Society know how fallacious these statements have turned out to be. Here they are, at the end of the second year of their management, with a new debt of £5000 added to the old one of £50,000, and the prizes of last year we believe still unpaid. We are willing to believe that those who made those statements and who have administered the affairs of the Society during that period were mistaken, and that they regret the present state of affairs as much as any of the Fellows can do. But we would ask how it was, that knowing the low state of their finances, they permitted a schedule to be issued only a couple of months before the annual meeting, in which inducements were held out to horticulturists to exhibit at nine exhibitions during the present year, and when they met the Fellows they announced their inability through lack of funds to carry out their programme?

It is quite evident that this crisis is the most severe through which it has been the ill fortune of the Society to pass. It has survived many, and we trust it may yet survive this one; but the conditions now are very different from all the others. It has become apparent that the income is wholly inadequate to the expenditure, and that expenditure, too, made with every regard to economy. It would be impossible to carry on the Society and to furnish the necessary attractions with a diminished expenditure, for if they are curtailed the subscriptions of the Fellows will naturally drop off. It is to be borne in mind that it is not from a spirit of loyalty to horticulture that the large income of the Society is obtained. There are some Fellows as exacting as Shylock, and they demand their rights and privileges come what may of horticulture.

It appears to us to be a question of some importance just at present for the Council to consider what is to be done. Of whomsoever the Council is composed this one fact they will have to face, and that is the insolvency of the Society. There is no blinking the question. The lease is passing away, and instead of the debenture debt being reduced, and the annual expenditure of the Society thereby diminished, there it remains in all its original integrity with £5000 additional. For our part we do not see how the Society can go on unless the Council take immediate steps and apply to the Royal Commissioners to relieve them: that is the proper course to be taken, and the sooner they take it the better. Meanwhile between this and the adjourned meeting, which is to be held next Tuesday, let the Fellows take these matters into their serious consideration

and be present at the meeting, so as to support any course that may be devised for saving the Society and for preserving its legitimate functions.

GERANIUMS LAST YEAR.

Though somewhat late in the season I send you a few notes of Geraniums grown last summer, and first I may say that I quite agree with your correspondent "C. S. B." in the Journal of August 20th, when he speaks so highly of Waltham Seedling, for I certainly find that there is no dark scarlet variety to equal it; also with regard to Beauty of Calderdale amongst the bronzes, which is the freest grower of any that I have tried, though Mrs. Longfield with me is nearly if not quite as free. "C. S. B." also speaks of Mrs. Upton, which with me is no mere pigmy, but grows most vigorously. Pink May Queen I find to be exquisite for pots and indoor culture, but comparatively useless out of doors.

With regard to Vesuvius, which "C. S. B." and also Mr. C. P. Peach speak so slightingly of, and say they mean to grow it no more, I can only say that I can find no other bedding Geranium that can approach it, much more equal it. It is one mass of bloom, and a bed of it is perfectly dazzling to the eye. It may be that the soil here suits it better than elsewhere, for I do not find that it is at all apt to shed its petals with hot sun or wind, which Jean Sisley (in other respects a splendid bedder) certainly does.

For pot culture I find Mrs. Wm. Paul, Donald Beaton, and Masterpiece to be amongst the best. The last-named is an enormous trusser of the Nosegay variety, and is the very best that I have grown for blooming in pots all through the winter. Amongst the older varieties I find few to come up to Indian Yellow and Sutton's Scarlet Perfection as bedders for lasting well in bloom all through the season.—E. C., *Oakham.*

FORCING STRAWBERRIES.

After reading Mr. Taylor's note on Strawberry forcing (page 135) I wish to say a few words as to my mode of culture, and to recommend, in preference to that of layering the runners in their fruiting pots, to layer them on the ground where they are growing, from plants of the previous summer's planting, whilst there is vigorous growth in them.

As soon as rooted take them up at once and pot them in their fruiting pots. I use the 48's, and find better results than from pots of a larger size. As to soil, I use a good part rich friable loam, a little leaf soil, and one-third well-decomposed cow dung. After potting they are set in the shade a few days to recover from any little check they may have received, and then take a place in the frameyard well exposed to the sun and air. They are stood about 1 foot apart, and well supplied with water during the summer.

On the approach of heavy autumn rains they are put in cold frames, placing the pots on boards to stop their rooting in the earth. This shelter assists them to mature the crowns, which are very stout and good this year. They are now in a vinery throwing up some fine large bloom.

As to red spider, I can only say if they exist at all they have not much chance to prosper, as I have a bed of fermenting dung and leaves in the house, which I well know is a capital antidote. It is, however, always favourable to the increase of the red spider when you see the fruit with the hard green patches alluded to by Mr. Taylor. In my experience this want of swelling is partly owing to the want of proper watering, as of course they should not want for a good supply of water till they get their fruit of moderate size. A good preventive of red spider is to water with liquid manure alternately, and withhold when the fruit shows colour. My plants were in a cold frame till the first week of January, and then introduced to a house of cool temperature for a week or more.

I am of the same opinion as Mr. Taylor as regards the plants being placed on pieces of turf when on the shelves, although I have not experienced it myself, not being able to find time for many such little requisites.—C. M., *Morville House.*

Leeds Horticultural Show.—"An Exhibitor of the R. H. S." complains of the withdrawal of the Hyacinth Show from the series of the Royal Horticultural Society's shows, and I ask him and other intending exhibitors to read the advertisement in your columns of to-day of the spring Flower Show at Leeds. If successful it may be followed by other season shows, which it is hoped may become annual. The schedule is extensive and the prizes good. The room in which the Exhibition will be held is admirably adapted for such displays, and I am sure any plants sent for exhibition will have every care taken of them.—J. B. Stead.

HEATING BY GAS-HEATED BOILER.

From one or two letters which have appeared in our Journal I venture to think that a little information with regard to warming a greenhouse by means of hot water heated by gas may be interesting and useful to some of your readers who, like myself, live in a town and delight in doing a little in flower-growing. My house is on the west side of a street running north and south or nearly so, and the town itself is celebrated for the quantity of rain, and I might safely say smuts; nevertheless, I can manage to grow many things well enough to be pleasing. My walled-in garden is 42 feet square, and against the west wall I have, with the aid of my late coachman, erected my lean-to greenhouse. Of its structure I need not say a word beyond giving dimensions. It is 18 feet 9 inches long, 8 feet wide, 6 feet 6 inches high in front, and 9 feet 6 inches high at the back. In continuation and at the same elevation is the potting house, a wall dividing the two. In the corner of the potting house stands a little boiler heated by gas, which during the late very severe weather was quite powerful enough to do all that was required.

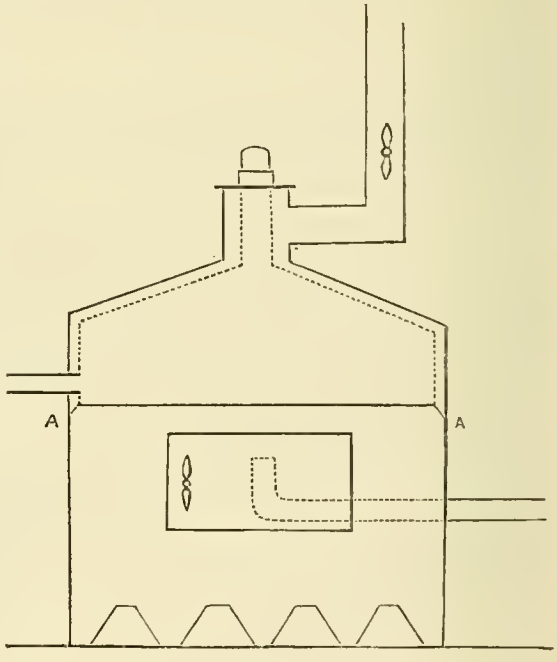


Fig. 45.

I question if the shape of the boiler is a great novelty, because I put on paper the same design as the man who made the boiler had done, without any consultation about it; but the burner, which is in my humble opinion the great cause of success, is invented by Mr. Sharp, in the employ of Mr. John Garner of Wood Street, Liverpool. The accompanying sketch (fig. 45) of this boiler will, I think, be interesting, as it is so compact. The boiler itself is made of copper and the case of sheet iron, the fine being of zinc. The latter ascends perpendicularly through the roof and has a small revolving cap on the top, or the down current extinguishes the flame in very boisterous weather. The boiler rests on a small iron rim, A, A, in which are punched a few holes, and through them the gas vapour passes over the boiler to the flue. The pipes attached to the boiler for flow and return are 1-inch, and the pipes in the greenhouse are 3-inch; a flow and return being taken along the front of the house and the same at the back. The length of the 3-inch pipes is therefore 75 feet. The 1-inch pipes lead to them across the end of the house.

I have said nothing about consumption of gas, but now I will say a few words on that point. I cannot give the quantity this one boiler has consumed for this reason. The first boiler I had made on this principle was very small—only 10 inches in diameter, overcase and all, and which was to heat a forcing pit; and so marvellously did it answer that I had the larger size made for the greenhouse precisely on the same plan. I have kept the gas burning constantly under both these boilers since the 10th of November, 1874, to the 18th of January, 1875; and the meter shows that they have consumed between them 26,800 feet of gas at 4*s*. 3*d*. per 1000—£5 12*s*. 10*d*. worth, or at a cost of 1*s*. 7¾*d*. a-day—a price I should have to pay a man to look after a fire, besides finding the coal. I have two burners under my largest boiler, a small one and a large one: the former I shall use when the weather is mild and I want but little heat, and the latter when the weather is frosty.

I shall be glad to answer any inquiries through your valuable paper, or show my little wonders (for such I consider them) to anyone of your subscribers who would like to see them.—J. W.

NOTES RELATIVE TO THE POTATO.

In the Journal of February 25th, pages 157-8, Mr. E. Luckhurst gives some notes under the above heading, and as everything relating to the growth of the Potato must be interesting, especially now when we are thinking of planting our 1875 crops, I beg to dissent from some of Mr. Luckhurst's premises. After quoting from Allison to show that greater blight existed on rich soils than on poor ones, the writer says, "In giving this quotation from Allison I do not, of course, intend to infer that a poor soil is at all preferable to a rich one for Potato culture; that would be simply absurd."

Here I beg to differ from Mr. Luckhurst, and as one ounce of practice is worth a ton of theory I should like to ask him how he accounts for the fact that in the district of Lonsdale North of the Sands, North Lancashire, which is surrounded by a tidal bay, close to the lakes, and where the rainfall is the greatest in England, the Potato crop is the soundest in the United Kingdom! Here we attribute it, rightly or wrongly, to the nature of the soil, our Potatoes being mostly grown on poor sandy lands, and chiefly with nearly dry farmyard manure. Our farmers hold that the lighter the manure the sounder the crop. For many years the staple sort was the Fluke; but in process of time this variety became worn out by disease, and we are now almost wholly growing Scurries. Last year's crop was the largest and least affected with disease of any we have had for the last twenty years, as is instanced by the fact that good, sound, wholesome Potatoes are selling in our markets at 6*d*. per stone of 14 lbs.

My own opinion has long been that rich soils and rich manures are the greatest friends to the Potato blight, and in support of this I may instance the experiments made by a friend in a garden, who has also held the above opinion. Year after year he has planted with the smallest possible modicum of light dry manure, taking care to select his seed from Potatoes grown on poor sandy soils, and has constantly taken up prolific sound crops, though the tubers themselves are not so large as those of his neighbours. At the same time the latter, their gardens adjoining his, and the soil of precisely the same nature, have been planting with the richest manures they could procure. The result has been that their crops are invariably diseased, some years so much so as not to be worth lifting.

I do not profess to treat of the Potato blight on scientific grounds, but experience confirms me in the belief that much of the disease is due to our behaving too well to this useful root. We have pampered it with overfeeding until we have rendered it delicate and liable to decay.

If anyone wishes to test the truth of my observations, let them take the top off a few rods of old grass land, procure some hardy sound seed Potatoes, and plant them entirely without manure, and I will guarantee a good crop free from disease, and of the finest flavour. If the seed be the remnant of the previous year's diseased crop, of course the trial would not be a fair one. We cannot reasonably look for sound crops from diseased seed, for in this way the disease is mainly propagated.

I have said that the 1874 crop of Potatoes has been the heaviest and most free from disease of any that we have had for many years; and lest any of your readers should fancy that we have had an exceptionally dry year, I may say that our rainfall in 1874 was 54.45 inches, and that rain fell on 207 days. In May we had 1.83 inch; June, 1.08 inch; July, 2.86 inches; August, 9.32 inches.

The general impression seems to be that the Potato disease is due to atmospheric causes. To this I would reply, Is our atmosphere changed from what it was prior to 1845? Were not the same causes in operation prior to that year as now? This theory is accepted simply because it takes the matter out of our hands. It is a non-preventible cause, and takes from our shoulders the responsibility of providing a remedy. My impression is, that although the remedy is a difficult one, yet we have a remedy.

To the introduction and general use of artificial and rich manures the disease is due. Year by year we have weakened the constitution of the Potato by over-indulgence in good living, and as it has taken something like thirty years before the effete invalid has reached the full state of corruption, so it will take many years of united—and to be effective it must be united—retrogression to bring it back to its original state of hardihood and health.—Beta.

MEALY BUG.

Though we often hear of plans for getting rid of this horrible insect, I should from observation very much doubt if it ever is entirely eradicated from any collection of plants on which it has once been established in any force. Where from previous neglect it has once gained a firm footing, it appears to require constant care and labour to keep it down, but I much question if it ever is quite got rid of so as not to appear again. Can any of your readers say if such is the case to their knowledge? I cannot help thinking that in new houses it would be far better if people would take care to avoid its introduction than inquire how best to combat it. It is now nearly thirty years since I made up my mind never to grow mealy bug whatever else I grew, and having as much glass as most persons in the nursery business, I can say what everyone cannot say—that I never have grown it. Knowing how impossible it would be to prevent its introduction, I gave strict orders that any bought-in plant should be carefully examined, and for a time kept as much as possible by itself, and that if any trace of mealy bug was seen on it, it should be at once burnt whatever its value. Few years have passed without a plant or plants being burnt, but the whole value of such plants has been very small, whilst if this pest had once been established in my houses it would have taken the labour of an extra man or two to keep the plants clean. Now it is a great pleasure to enter a house 100 feet by 30, where almost every pillar has Stephanotis growing up it, and say you will find no mealy bug anywhere here. Prevention in this case is better than cure.—J. R. Pearson, *Chilwell*.

CULTURE OF THE HYACINTH IN GLASSES.

Being desirous of assisting, however limited may my power of doing so be, I beg to tender a few remarks, quite as much to solicit as to furnish information. It is not to be wondered at that so much uncertainty should exist by the culture of Hyacinths in glasses. Many are the inquiries from ladies why the Hyacinth so often fails. The atmosphere of the hall and room is so variable—sometimes close and stifling, often subject to draught, and always much drier than plant houses; these conditions and neglecting to change the water are the chief sources of Hyacinth failures.

The Hyacinth glasses are so well known that I need not describe them, but I may just mention that in selecting glasses always choose coloured ones and with the lower part the widest, to allow the roots to have plenty of room. The glass ought to be at least 9 inches long, with a cup at the top to contain the bulb; they should be filled with clean soft water just up to the neck, but not to touch the bulb.

The time to do this depends upon the wishes and wants of the cultivator. If desired early they should be put into the glasses as soon as the bulbs arrive from Holland. When they are so placed, and at whatever time, they should be put into a dark cold room for twenty to twenty-five days to cause the root to be formed previously to the bloom bud appearing. Examine them occasionally and remove gently any scales that may be decaying, but be very careful not to injure the young roots, which will soon be seen breaking through the skin at the base of the bulbs. One drop of spirits of hartshorn put to the water of each glass, changing the water every week and adding the same small quantity of the hartshorn, is beneficial. They should be brought into full light of the window,

but even then if possible avoid a window facing the midday sun, or one in a room where there is a fire. If these precautions are attended to it will induce a gradual growth, and consequently a much stronger foliage and finer bloom.

When the roots have nearly reached the bottom of the glass there will be at the extremity of each a covering of mucous matter. This soon stops the absorbing power of the roots by which the food of the plant is conveyed to the leaves, when the plant is injured and often the whole set of roots are destroyed. To prevent this the roots should be drawn carefully out of the glasses, and in a wide vessel partly filled with clean soft water the roots of the bulb should be placed, drawing them carefully through the hand, yet using a gentle pressure. This should be done two or three times until the roots appear quite clean. The glasses in the meantime should be thoroughly washed-out and wiped clean and dry, then gradually work the clean-washed roots into the washed glass before putting-in any water. If the roots are numerous it will be found necessary to twist them round and round till they reach their old quarters and the bulb rests on the neck of the glass. Now fill the glass with clean soft water and replace it in the window. Once washing the roots will be sufficient to carry the bloom through. The regular changing of water will be all that is required.

After having bloomed the bulbs should be taken out of the glasses, preserving the roots, and lay them in a border. A slight watering will be necessary, and they will ripen the bulb and the leaves will gradually turn yellow and decay. They should then be taken up and keep them dry and cool until the middle of October, then plant in the borders.—J. H., *Gardener to Lady Caroline Legge.*

PROTECTING SEEDS FROM BIRDS.

For the information of your readers who believe in the services of small birds, and do not therefore care to kill them, I suggest the following simple mode of protecting Peas and other seeds. I have adopted it, and know that it answers well. Take a lath and cut from it three pieces, 1 foot, 6 inches, and 3 inches long respectively, then fasten them by nailing or tying in the following form. Place them at intervals of about 6 feet along the rows of seed, and stretch fine twine along the sticks, fastening it at the points *a*, *b*, *c*. The five lines thus made will frighten the birds, and prove as effective a protection as wire at 9*d.* a-yard. Seven lines are better than five.—P.

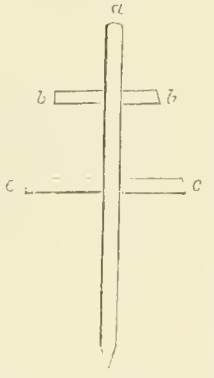


Fig. 46.

FLOWER MISSIONS.

Having read the deeply interesting paper on the "Flower Mission" in your *Journal of Horticulture* for December 24th, 1874, I am inclined to think your sympathies are in favour of this beautiful work among the sad, and sick, and poverty-stricken inhabitants of our great city. With considerable success the ladies have carried on similar missions in Scotch towns. I believe Miss Stanley has a successful one in Westminster. In connection with one mission last year we saw the wonderfully softening influence the little flowers exercise even in the lowest courts, where without flowers it would be well nigh impossible to venture.

It is my desire this year to organise a regular flower mission for the east end of London, with lady workers at one or two central depôts. The great hindrance is the expense of carriage; but I think the railway companies might be influenced to convey them for the flower mission free, and I hope to write to them, but I thought a strong influence could be brought to bear on them by sending copies of your paper on the subject to them. My object in writing to you, then, is to ask if you have any old disused numbers containing the account which you could let me have for this purpose.—E. A. H.

[We regret that we have no copies such as "E. A. H." asks for, nor do we think that railway directors would need such a detail. The humane object need only be stated, and requires no advocacy. The secretaries would in most cases give the necessary aid. Any assistance we can render will be most willingly afforded.—Eds.]

CUCUMBERS, SUMMER AND WINTER.

Much has been written on Cucumbers, their mode of culture, &c., but nothing has been said as to how long the plants will last after being planted out in the house.

The winter Cucumbers of your correspondents hitherto have been planted in the autumn. I will treat on plants that were struck and put out in the spring, and answered for summer, and also continued through the winter. I had charge of a small Cucumber house in a former situation under Mr. J. Batters. I went there in January, 1872, and a plant was covering half of the trellis in the house. This plant had been bearing since the preceding February, or nearly twelve months. The same plant with two top-dressings of old mushroom-bed manure carried as good a crop of handsome and healthy fruit through the following summer and winter as the young plants of spring, 1873, which were planted soon after I went to the place. It would no doubt have continued another season had not the woodwork given way on which the soil wherein it grew rested, thus compelling us to have repairs made good with new materials.

The pit in which the Cucumbers were planted was 12 feet by 6. Three rows of 4-inch pipes ran the length of the bottom of the pit, and 3 feet above the pipes was the framework on which the soil rested. Only 4 inches of soil was used, with the exception of the ridge which was 8 inches in thickness. The variety grown was Telegraph, raised from cuttings taken off about the middle of February; these were inserted in a pot under a bell-glass and placed in a good bottom heat, and when struck potted-off singly into 60's previous to being planted out in the house.

The soil both for potting and planting was warmed previous to being used: this was composed of loam mixed with a little old mushroom-bed manure and a small portion of leaf mould. A ridge was formed and the plants put in, and when the roots began to show through the surface the rest of the soil, 4 inches thickness, was placed over them. With this small amount of soil, and always warm water, occasionally liquid manure, and two top-dressings of old mushroom-bed manure, these plants flourished and bore an abundance of handsome fruit free from disease of any kind. I should state that an aperture was made in the wall of the pit facing the pathway; this was closed with a shutter, so that on very cold nights we could leave the space open, and so let the heat into the house. There being only one 4-inch pipe round the front of the house, which returned into the pipes underneath the bed, we had great difficulty in keeping the house at the proper temperature through the winter season, it often being as low as 60°; and but for the aperture before mentioned, even with a flow and return pipe at the back of the house we should not have succeeded so well as we did.

Plenty of warm water at the roots was a point of much importance, and a standing order was to never use cold water, but to keep the plants clean, the fruit thinned-out regularly, and never allow the foliage to become overcrowded. This practice will always produce Cucumbers both summer and winter, the plants being well established and more capable of bearing through the winter season than those planted in the autumn. Telegraph I find to be the best winter Cucumber for general purposes, it has few superiors, being productive and good.—F. H. F.

THE LILY OF THE VALLEY.

This plant is so well known by all, and I think I may say is such a general favourite with most people, that it needs no praise from me. It is prized by all lovers of sweet flowers, and is much sought after by dwellers in both town and country. To such I address the few remarks I have to make on the forcing of this ever-welcome Lily.

How often do we see it in both large and small gardens as soon as it has served its purpose—that is as soon as it is out of bloom, cast out of doors as if unworthy of better care? Its fate is often to be taken from the greenhouse and pitched at once behind some north wall, exposed to cutting winds and occasionally may have to submit to 10° or 12° of frost. This I must call barbarous treatment. But I may be asked, "What are we to do with all these forced roots after blooming? We have so many other things to attend to that we can-

not possibly find room for all." Very true; but I would say, Do as I do, make an effort, and you will soon find the truth of the adage, "Where there is a will there is a way." When they have finished blooming I let them remain under glass to finish their growth. It is true they do not get the best position in the houses, but are stood by the sides of pathways, or, in fact, anywhere, so as they get light and water. I am fully sensible of the difficulty of finding room for such things at this important season of the year, when every inch of space is valuable. But how many places are there where room could by a little forethought be had—room suited to the simple requirements of Lilies, and preferable to a withering north aspect out of doors? My plan is, when out of bloom, to stand them in a late vinery or Peach house, to remain there say to the end of May, or whenever bedding plants are turned out to harden.

The reason I make these remarks is to correct an erroneous idea that they will not force a second year, and therefore by some they are considered as useless. Beyond question that is a mistaken idea, as I shall presently show; but let it be understood that I do not write for the purpose of crying down the practice of buying-in fresh clumps every year—nothing of the kind, for I never seem to have sufficient, although we buy-in annually. Then why take further trouble if they can be bought-in yearly? The reason is that I find, as a rule, that old plants reasonably cared for—that is, plants from two to three years old, serve me better than the newly imported clumps. For some years I have ceased to force the latest importation the first year, but simply let them bloom in their own season in a cool house.

Every batch of roots received is labelled with the date of the year and the time of potting, and at this present time I have a pot dated 1872 containing thirty-two spikes of blooms. When I attempted to force the newly imported clumps it was rarely they did much good the first year; but when they have been gently forced a year or two and allowed to finish their growth under glass they scarcely require forcing. We had them in bloom early in January with but a very slight forcing, which I could never manage so early with the newly imported clumps. After turning them outside they get water with other things as they require it until the foliage dies down, then they are simply turned on their sides for a period of rest. I commend this plan on account of its utility, efficiency, and economy, as, of course, no gardener ought to incur a larger expenditure than is needful in the discharge of his duties.—G. R. Allis, *Hartsholme Hall.*

DALKEITH.—No. 1.

Dalkeith is a small parish of Mid-Lothian, lying on the banks of the North and South Esk rivers. Adjoining the town is Dalkeith Park, the seat of the Duke of Buccleuch. It is easily reached by rail from Waverley Station, Edinburgh, and the gardens are only a few minutes' walk from the station of Dalkeith. A very brief outline history of the place is appended; to treat at length, however interesting it might be, would supplant much gardening lore of paramount moment. Dalkeith Palace was erected about the beginning of the last century. It is a large square structure, in which the Corinthian order of architecture is visible. The site was previously occupied by the old castle of Dalkeith, which was a place of considerable strength, and withstood some sieges. Its first occupants were the Grahams, afterwards it became the seat of the Douglas family, succeeding in turn to the Mortons, one of whom was Regent of Scotland and resided here, subsequently ending his life on the scaffold. On this event the castle appears to have been considered public property. Eventually the estate came into the possession of the Buccleuch family, and has been held by them for upwards of two centuries.

The park is a noble piece of ground of about 8000 Scotch acres; its surface is gently undulated, and is broken by the rivers above mentioned, whose streams unite about half a mile below the house. The South Esk has a romantic appearance by the overhanging wood, its twin sister coming more into the open day, but has pleasing walks on its banks, from which we obtain glimpses of the town and church of Dalkeith. The park is well timbered with old Oaks and other valuable trees. There is nothing elaborate in the style of the ornamental grounds—that is, they contain few artistic landscape touches.

Passing through these grounds from the kitchen gardens to the Palace we follow a winding walk along the brink of a steep slope on the north side of the river Esk to the Montague Bridge. This bridge, with its noble arch which spans the bounding river below, forming at its base a small cascade (to be figured in a subsequent issue), is an attractive feature of the place. This bridge carries the principal carriage drive from Edinburgh to the Palace. The massive old pile, which has weathered so many storms, is situated on a steep promontory overlooking the river. On its north-east sides the old sandstone walls are clothed with a rich and luxuriant growth of Ivy, reaching occasionally to the eaves, which are upwards of 60 feet high; this adds much freshness and beauty to the plain and weather-beaten exterior. On the south-west front the walls are destitute of covering, and the architecture is more broken. This front is approached by a fine sweep of carriage drive (fig. 47), and overlooks a prospect of simple rural beauty rather than of pretty gardenesque touches, which would mar by their artificialism the natural boldness and dignity which characterise the demesne. A broad grassy terrace and wide gravel walk extends from the base of the Palace to the top of the slope, some 50 feet high, running down again to a smooth mossy lawn lying in the bottom of the valley a few feet above the level of the Esk.

The slope is covered with an even growth of Portugal Laurel, pruned-back annually to a height of about 2 feet, and irregularly interspersed with ornamental trees and shrubs, giving a very pleasing effect, and forming the best of all coverings for such a high terrace slope. We may remark that evergreens of most kinds grow here with great luxuriance, and are seldom or ever injured by frost. The plantations are a perfect jungle of Holly, Laurel, Box, Yew, Ivy, &c.; and even Rhododendrons thrive well, considering the dry nature of the soil. We follow the drive away to the left through a wide-spreading grove of fine old trees, noting the great height (over 100 feet) and size of many of the Beeches, Limes, Sycamores, and Chestnuts, and entering a small enclosure through which the South Esk river flows we soon arrive at the circular conservatory.

This is a richly-designed piece of architecture, and, as a specimen of elaborately-cut stonework, said to be unequalled in the kingdom; but the site being low and shady and out of the way its effect is comparatively lost, and consequently there is no effort made to keep it filled with such a display of flowering and other plants as one would expect to find in such an imposing and richly carved structure. It is chiefly filled with plants that can be comfortably left to themselves for a time in a greenhouse temperature, and amongst others we noticed several fine specimens of Tree Ferns, Palms, Rhododendrons, &c and a good-sized specimen in fine condition of the beautiful Japanese plant, Eurya latifolia variegata. Leaving the conservatory we notice on the surrounding lawn some fine specimens of ornamental trees, particularly three Cedars of Lebanon, with clean straight boles 10 to 12 feet in circumference, and 15 to 20 feet high, branching into massive limbs and wide-spreading heads, forming a very distinct feature with the deciduous trees clothing the adjacent slopes. There are here also a specimen of Salisburia adiantifolia over 40 feet high, Magnolia conspicua 24 feet, a Weeping Ash nearly 50 feet which sweeps the ground, and a fine old spreading tree of the Hemlock Spruce.

Retracing our steps towards the Palace we pass in front of it, regretting that time will not permit of a closer inspection of it and its rare and valuable contents, which by the kindness and liberality of his Grace the Duke of Buccleuch are freely open to the public on certain days of the week; the surrounding pleasure grounds being also thrown open at the same time, a boon highly appreciated by the inhabitants of the busy crowded towns and villages in the neighbourhood. Just before leaving the grounds we pass on the left the private chapel of the Buccleuch family, a massive and elegant structure, built about thirty years ago, in which full Episcopal service is regularly held for the benefit of the neighbourhood, whether the family are resident or not.

Returning to the kitchen garden enclosure we will proceed to note the contents of the very extensive glass structures for which Dalkeith has long been so deservedly famous, and will confine this paper chiefly to the plant-growing department, deferring a notice of the fruit ranges to a future occasion. I am not aware that Dalkeith is generally regarded as a "plant place," yet it has good claim to this distinction, and it is not too much to say that, well as the fruit-growing department is conducted, the plants merit equal note and observation. Hard and soft-wooded plants are alike well grown. Entering the

Heath house we find large old specimens of the following standard kinds:—Ericas ampullacea, Aitoniana, Turnbullii, Retorta major, Austiniana, Jacksonii, Elegans, Marnockiana, Masconi major, Fairrieana, florida, ventricosa of sorts, tricolor of sorts, Cavendishiana, Spenceriana, Lambertiana rosea, Savillii major, Exquisite, Amabilis, &c.; such a collection of large plants as is seldom met with now-a-days. There is also a good collection of smaller plants of all the best sorts growing-on to replace the large specimens, many of which will soon be past their best.

The whole collection gives evidence of skill and attentive care in keeping these aged plants in the good condition they undoubtedly are. The next house is devoted to the culture of Camellias. The plants were in the perfection of health, and demanded inquiry as to the outlines of culture which gave such satisfactory results. The house is a good roomy structure, upwards of 60 feet in length and 25 feet wide. It has a ridge-and-furrow roof of opaque glass, which at once renders shading unnecessary, and preserves the blooms a long time in beauty. Along the centre of the house is a row of fine plants of the old Double White, still unsurpassed for general usefulness; and on each side of them are good healthy plants of such useful sorts as Imbricata, Lady Hume's Blush, Jubilee, Donckelaari, Cup of Beauty, Duchess of Buccleuch, Elegans, American White, Bealii, Duchesse de Berri, Countess of Orkney, Fimbriata, &c. These are all planted-out and growing luxuriantly in a border about 2 feet deep of pure and rather light turfy loam. From this house the supply of Camellia flowers has to be kept up from November until May, so that the house has to be treated on the cool system during that period—that is, a minimum

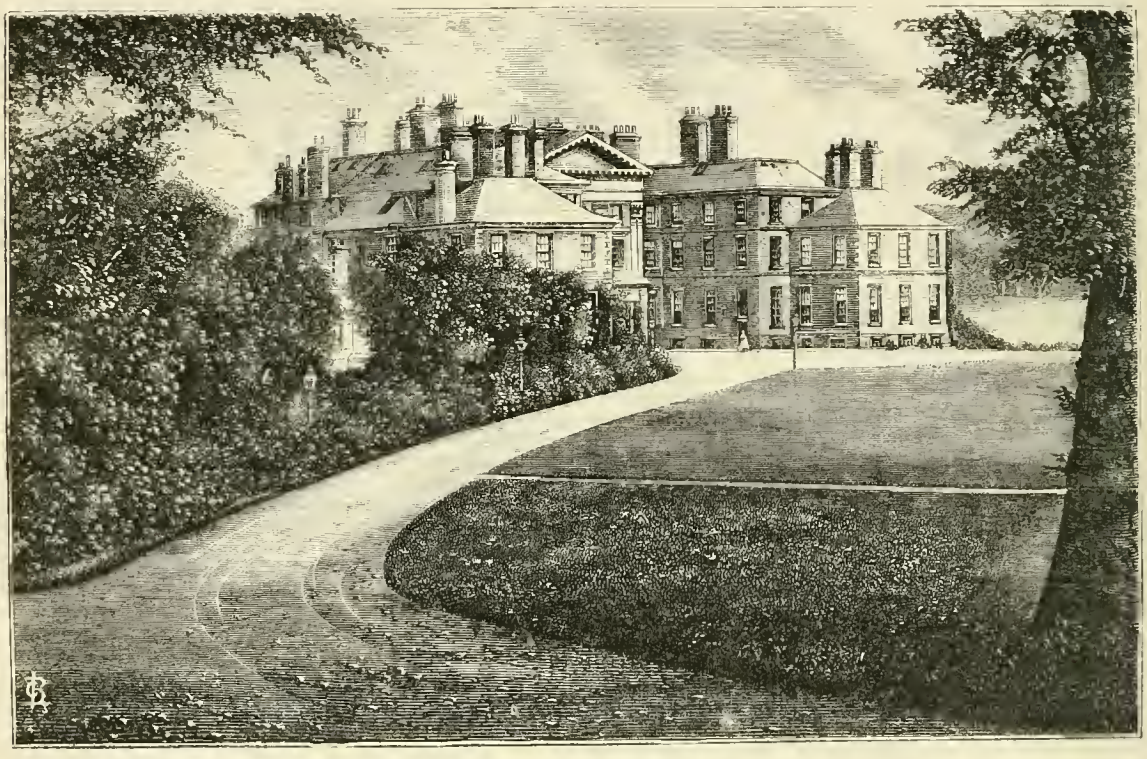


Fig. 47.—Dalkeith palace—south-west front.

night temperature of 40°, and plenty of air on at all times when the state of the outside temperature will permit of it, cold draughts being carefully avoided as being very injurious to the flowers. After the demand for cut blooms is over early in May any left are taken off, the plants gone over, pruned, and carefully cleaned, the surface of the border scraped clean, a top-dressing of light turfy loam given, the house thoroughly cleaned, and then kept close to cause the plants to make their growth freely, and set their buds as quickly as possible. Heat is applied to keep up a night temperature of 65°, and the plants receive a thorough drenching overhead from the engine every day, the supply to the roots being also liberal at this season. They make rapid growth, and the buds begin to show early in July, when more air is gradually given and the fire heat reduced, till by the end of the month the house is again cool, but kept regularly syringed and watered as long as the warm weather continues, after which the syringe is discontinued, and the watering carefully attended to for the remainder of the season. Manure water is occasionally given when they are in full growth and in full flower in early spring. By such means the plants do well, bear fine crops of flowers, and never drop their buds. A few plants of Maréchal Niel and Gloire de Dijon Roses are trained to the rafters, where they do well and flower freely; also a few Passifloras, Tacsonia Van Volxemii, &c.; but they are all kept within bounds, and not allowed to overcrowd or interfere with the health of the Camellias.

The next house in this range is the Orchid house; if anything, too large for most Orchids. It is span-roofed, 55 feet long and 23 feet wide, with a wooden stage in the centre, and a wide stage outside the path all round. There is a fair collection of Orchids on the middle, front, and end stages, and on the back stage a collection of stove Ferns. Most of the popular and useful sorts of Orchids are grown, the Vandas being particularly fine, comprising several good plants of such sorts as Vanda suavis Veitchii, the best of the suavis section; V. tricolor, Dalkeith variety, a very fine if not the best variety of tricolor, and the original plant of which is a splendid specimen, about 6 feet high and nearly as much through; V. insignis, V. teres, &c.; also a fine plant in a tub of the best tall variety of Sobralia macrantha, and many large specimens of Dendrobiums, Oncidiums, Zygopetalums, Cypripediums, Phajus, Lycastes, &c., and a good plant of that grand Orchid Angræcum sesquipedale with six bloom spikes.

The Ferns on the back stage are chiefly grown for table and house decoration, and consist of all the best varieties for that purpose, with a few specimens interspersed, such as Adiantum trapeziforme, cuneatum, macrophyllum, formosum, Neottopteris nidus, &c., all doing well in this shady part of the house. Behind the Orchid house and entered from it is the fernery, containing some good specimens of Tree Ferns sadly cramped for want of head room, and a good variety of smaller Ferns requiring a moderate temperature, including some nice plants of Todea superba, pellucida, and Wilkesiana, the rare Ceterach

aureum, and Platycerium Wallichii; also a very large specimen of Todea arborea, with a stem over 8 feet in circumference, evidently some centuries old. Platyceriums, "Bird's-nest Ferns," Niphobolus, and others are growing nicely on blocks of wood with a little sphagnum, and hung against the wall with pretty effect. Returning through the Orchid house we notice a fine specimen of that best of all basket Ferns, Goniophlebium subauriculatum, with fronds drooping down 7 to 8 feet; also, suspended in baskets from the roof are some healthy young Pitcher-plants of the best sorts.

The next house in this range is a span-roofed stove, 30 feet long by 23 feet wide; we find it filled with a good collection of foliage plants, such as best sorts of Palms, Crotons, Marantas, Anthuriums, Dracænas, Caladiums, Alocasias, &c., all grown with a view to the usefulness during winter and spring for decorative purposes. Here we also noticed a good plant of Adiantum farleyense, with a healthy lot of younger plants growing in 6-inch pots for table decoration, for which they are in demand, and are very graceful, but do not stand it well, one night being generally sufficient to so injure the fronds that it takes weeks to recover them. Here also is a good plant of Cochliostema Jacobiana, which produces its curious and showy flowers all the year round, never being long without a spike or two expanded.

We now take a look into two houses 150 feet in length and about 12 feet wide. The first we enter is a greenhouse, and is filled with a varied lot of plants, such as Cinerarias, Amaryllis, Heliotropes, Primulas, Mignonette, Pelargoniums, &c., the next being used as an intermediate house, and in which were growing nice lots of standard Epiphyllums, Poinsettia pulcherrima, Euphorbia jacquiniæfolia, Begonias, Gesneras, &c., all grown for winter and spring-flowering. Leaving this we pass a long pit with a north aspect, filled with the usual sorts of bulbs in pots, to be moved by-and-by into the forcing houses as required to keep a regular supply in flower during the season. They are plunged in ashes, just covering the pots, and in severe weather sashes covered with thick roofing asphalt are put over them, but always pulled down in mild weather, and by this means the bulbs never get drawn, and thrive well with the smallest amount of care. In this yard are also situated the frames for forcing and protecting vegetables of all the usual kinds required in such an establishment, the Seakale and Rhubarb being forced in a lean-to shed close and dark, and heated with hot water. This shed was built specially for the purpose, which it answers well.

Our notes of this great and good garden are suspended on the threshold of the fruit department, which holds higher rank in the horticultural world than the ornamental features and products of the establishment. Our notes will be continued in a future number.—J. Wright.

LITTLE HEATH MELON.

I am sorry that Mr. Harrison Weir has disparaged Little Heath Melon, and I think incorrectly. If I could grow Scarlet Gem or Beechwood, most certainly I should not grow Little Heath (and I do not think anyone would for a moment compare them); but the advantage of Little Heath is that you can grow it in a cold pit with only a small quantity of manure, and indeed after you have grown Potatoes, and that you can thus have a very decently flavoured Melon, which I have found Little Heath to be. Nasty I have certainly never had it. A man who can have his haunch of venison may disparage plain mutton, but those who cannot get the former find the latter very decent eating.

I have made one omission in giving names of Strawberries grown, and that is President, which I have found most excellent in all circumstances, and amongst these I hope to try this year La Grosse sucrés.—D., *Deal.*

BULBOCODIUM VERNUM.

Mr. Robson has recently called attention to the welcome early-flowering Eranthis hyemalis, or Winter Aconite. Not nearly so well known as this, but which will assuredly and deservedly come into favour, is the plant named above. Coming into bloom simultaneously with the Snowdrop and Eranthis, it is a most valuable addition to our early flowers; rich in colour, dwarf in habit, and perfectly hardy, it is in all points a suitable companion to these.

Belonging to the natural order Melanthaceæ, in common with Colchicum, Veratrum, &c., the character of Bulbocodium vernum will be easily understood by those not yet acquainted with it by comparison with Colchicum autumnale, usually but improperly called the Autumn Crocus (this is Crocus sativus, or the Saffron Crocus), to which it bears a strong resemblance, but its colour—a bluish purple—is deeper and richer.

The directions for its culture are of the simplest nature possible; for where the Crocus and Snowdrop will grow Bulbocodium will thrive also: hence place the bulbs in good ordinary garden soil in groups of three, four, or five, as the case requires or taste directs, in a line with the Snowdrop and Eranthis, and then let them alone. When the flowers and foliage have died-off other plants may be inserted by the side of, but not planted on them, otherwise great injustice is done to the plant.

Like the Snowdrop and Crocus, the bulbs may be taken up once in two (still better in three), years for multiplication of stock and for giving the individual bulbs more room. This is a small trouble, but it will be amply repaid.

Following close upon, and in favoured spots simultaneous with, the above are Scilla præcox and Crocus reticulatus, the earliest and best of the yellow Crocuses. What a glowing array of colour and beauty is furnished by these five humble plants for the decoration of the garden in the earliest of spring days, when every moment of sunshine is so precious to the gardener and so enjoyable after the dreary winter weather! Yet how often are these plants subjected to the grossest ill-usage! It is surprising that it should have to be recorded, but it must be, and accompanied with strong and earnest protest—the foliage of these plants after the flower has passed away is frequently torn or even wrenched off, or hoed off before it has completed its natural functions, to make way for some jaunty successor.—A. H. Kent.

KNIGHT'S MONARCH PEAR.

"D., *Deal*," wishes to know other growers' opinions of the above-named Pear. I can fully confirm all he says respecting it. I had two trees of this variety, one a wall tree trained on a west wall, and the other a bush tree double-grafted on the Quince; this I rooted-up three years since. Previous to reading "D., *Deal's*," article I had cut all the branches back of the wall tree to engraft with a more satisfactory variety. The upper half of the tree I grafted with Huyshe's Prince of Wales about six years since, which always bears a crop of fruit of the finest quality. The fruit of the lower branches—the Monarch—drop-off a month before I gather the Prince of Wales. I have only a few days since thrown all the crop of Knight's Monarch Pears to the rubbish heap, they being shrivelled and worthless. My soil is a rich deep hazel loam on a dry open subsoil, on which Pears bear abundantly both on the Quince and the Pear stock.

The following varieties I find to be good here. Those I have marked with an asterisk are the best.

*Doyenné d'Eté, pyramid.
Jargonelle, bush.
*Beurré Giffard, espalier.
*Beurré de l'Assomption, wall.
*Bon Chrétien (Williams), bush.
Madame Treyve, espalier.
*Louise Bonne of Jersey, pyramid.
Fondante d'Automne, espalier.
*Beurré Hardy, pyramid.
Doyenné Bossouch, bush.
*Marie Louise, espalier.
*Marie Louise d'Uccle, pyramid.
Conseiller de la Cour, wall.
*Thompson's, wall.
Baronne de Mello, pyramid.
Alexandre Lambré, pyramid.
*Prince Consort (Huyshe), espalier
*Huyshe's Prince of Wales, wall.
*Doyenne du Comice, pyramid.
*Beurré Bachelier, espalier.
*Orpheline d'Enghein, espalier.
*Zephirin Grégoire, pyramid.
*Winter Nelis, wall.
L'Inconnue, espalier.
*Easter Beurré, bush.
*Joséphine de Malines, wall.
*Bergamotte d'Esperen, wall.
Olivier de Serres, espalier. (This Pear has ripened with me the past two seasons in January, and is soon rotten at the core. According to catalogues it should keep until April.)

—G. A. T., *Uppingham, Rutland.*

EUCHARIS AMAZONICA CULTURE.

I find no difficulty in flowering this plant twice a-year, but I think that is as much as can be done with an individual bulb. I think that where they are flowered three times a-year it may be from side bulbs that had not previously flowered. I would not, however, say that it cannot be done. I potted some on the 21st of July last, giving them a liberal shift. I put five bulbs in a pot (some 12-inch and some 9-inch pots), according to the size of the bulbs, and we have had a regular supply from Christmas until the present time. I had four spikes from every pot, with five and six blooms to each spike. I think the above is a proof that they do not want to be pot-bound to flower them. Of course I would not recommend them

to be potted each time they are flowered, as of course the soil cannot be impoverished in the time, but I would say, Pot as soon as ever they get potbound. The following is the treatment I would recommend.

After they have done flowering shake out the bulbs and put four round the outside of the pot and one in the centre, choosing pots according to the size of the bulbs, using rather a rich compost—three parts loam, one part leaf mould, and one part dung, with a dash of sand, taking care that the pots are well drained. After potting give a good soaking with tepid water, and place them in a light position in the stove for about two months, watering very sparingly until they are nicely rooted, then remove them into a cool house where they can have plenty of light and air, watering them only just sufficiently to keep them from flagging. Here they must remain for at least six weeks. Take them from the cool house, according to the quantity required at a time, and plunge them in a nice bottom heat, keeping the top heat at ordinary stove temperature. In three weeks to a month you may expect to see four spikes generally from each pot. After flowering treat the same as after potting. One thing I would mention, and that is, never give liquid manure until you see the flower spike.—C. E. S.

NOTES AND GLEANINGS.

We have received from Messrs. J. C. Wheeler & Son of Gloucester, samples of that delicious winter Apple Ashmead's Kernel. They are now at this late season quite plump and fresh, and the flavour is not to be surpassed. Planters ought to make choice of this in any collection they may form. The name is sometimes, but very erroneously, written Ashmead's Colonel and Colonel Ashmead's—a mere corruption of kernel, which is synonymous with Pippin, which signifies a tree raised from the seed or pip.

—— We learn that Mr. A. McKenzie of Alexandra Palace and Park, having pretty well completed the outdoor works and glass structures there, is prepared to take commissions in landscape gardening and the improvement of landed estates. We trust that Mr. McKenzie's engagements on private properties will not deprive us of his services in a public capacity, for his admirable work on the Thames Embankment and elsewhere constitutes him an important public benefactor. It is satisfactory to learn that, although now enabled to enlarge his sphere of operations, he will continue on the official staff of the Alexandra Palace Company.

—— A National Horticultural Show is to be held in the Gardens of the Manchester Botanical and Horticultural Society from the 14th to the 21st of May. The prizes are very liberal.

—— We have received the announcement that an International Horticultural Exhibition is to be held at Cologne this year from the 25th of August to the 26th of September, in the grounds of The Flora. It is to be under the auspices of the Empress and the Crown Prince. The programme is a very full and rich one, and embraces every branch of horticultural industry. We believe it is intended to form a committee in this country, the arrangements for which we shall announce as soon as they are completed.

—— It is known that Sir Alfred Slade, Bart., and the Hon. R. W. Chetwynd have resigned their seats on the Council of the Royal Horticultural Society. It is to be hoped that no undue haste will be shown in filling up these vacancies, but that the Council will wait and see what direction is given to the present movement consequent on the disorganised state he Society is unfortunately in.

NOTES on VILLA and SUBURBAN GARDENING.

As soon as the weather will allow of it, and the soil becomes workable, proceed to complete the planting of autumn-sown annuals immediately. Sow also patches of hardy sorts in the open borders, and if they should not come up freely and well there will then be time to make another sowing.

Hollyhocks.—Where these are in request now is the time to plant them out in their blooming quarters. I allude to those plants raised from seed or cuttings last August, and which, if strong, may be expected to bloom well during the summer. Those who are fond of raising their plants from seed, and can procure seed from a good collection, should sow the seed early in April, either in boxes in gentle heat or on a prepared bed outdoors. The seedlings should afterwards be planted thickly in a well-prepared nursery bed, and encouraged to grow by every means, and in due time many of these will flower and their quality can be decided upon as to whether they are worth retaining for future cultivation. By this means much trouble and disappointment will be spared; but, on the other hand, for first-class varieties, one cannot do better than go to those who make their cultivation a speciality and secure plants.

Dahlias.—These may now be started in gentle heat by setting the roots upon some light earth and covering them with the same material. They push out their shoots at the crowns, and may be divided into two or more plants as may be desired, with a tuber attached to each, and be potted. The above plan is applicable to those living northwards, but in the southern counties there need not be any such pains taken with them, for the roots can be planted in the bed where they are to flower. The latter part of April or the beginning of May is a good time, but when the shoots come up they will need a slight protection, as the Dahlia is a very tender plant.

Carnations, Picotees, and Pinks.—These beautiful flowers should be grown in every garden, and as extensively as space will permit. Their flowers are always welcome, and appropriate for button-holes, bouquets, or in vases, and they possess the quality of lasting almost as long as any flower grown. Those who have a stock of young plants in pots under protection may now let them have more water than formerly, and if they are named sorts pot in pairs, which will make a much better show than if single. A suitable soil is three parts rich loam, but as fresh as possible, the remainder rotten cow manure and leaf mould. After a short time they will thrive outdoors if stood upon a bed of coal ashes so that worms cannot get in, but they will need a slight protection during severe weather. Those which were raised from layers last year and have remained in store pots all winter, must now have more air to prepare them for finally planting out, but meanwhile the beds or places where it is intended to plant them should be well prepared. The Carnation likes a fresh soil, and if the bed has grown similar plants before, the soil should be taken out and have new added, so as to give them every chance. A stagnant site and very heavy water-holding soil should be avoided.

Some amateur gardeners pride themselves in raising seedlings of these as well as other florists' flowers, which is a very interesting occupation. The seed should be sown in boxes in heat, or they may be sown on a mild hotbed this month, and covered with a handlight; when well up they should be pricked out into nursery beds, and afterwards planted in a well-prepared bed. They will make fine plants by the autumn, and will stand the winter very safely. The next season they will flower, and any that are good and worth growing for cut blooms should be marked, and the layers rooted from them at the proper time, while all the remainder may be dug up and thrown away.

Chrysanthemums.—Propagate these as soon as possible. It is a first-rate plant for town gardens, and will thrive in the smoke better than most plants. Strike them now, and pot them on till they are sturdy plants. After once or twice pinching back select those to be grown-on in pots. Those for planting-out will grow by the sides of the house, or, if employed to decorate a walk in the autumn, they will answer well if planted-out in May. They will be the better of being stopped once or twice after that; but those in pots will need stopping up to the beginning of July for the large-flowered sorts, and the Pompons or small-flowered section not after the middle of June.

Pansies.—Stir the soil among those in beds, and give a top-dressing of manure, and no doubt they will require shelter from bad weather. Those who have a stock of young plants in frames of the Belgian sorts should now pinch out the leading shoot, in order that they may break previous to planting-out in beds or borders where they are to flower. They are very pretty, and will flower nearly through the summer if kept pegged down, manured, and not allowed to suffer from the want of water.—Thomas Record.

DOINGS OF THE LAST AND PRESENT WEEKS.

KITCHEN GARDEN.

The prevailing winds during the last week have been easterly, and the weather has been quite winterly throughout. Snow fell on two days equivalent to rainfall of 0.35 inch. It has been lying on the ground nearly all the week, owing to the extremely low temperature. The thermometer has fallen several degrees below the freezing point, on one occasion 10° of frost being registered. Under such adverse circumstances but little work could be done. We wheeled a good dressing of manure on to a piece of ground that required to be trenched; this kept the frost out of it and allowed of its being finished. In districts where the rainfall is deficient, much summer labour may be saved by trenching as much as possible of the ground during winter when other work is not pressing. Even if a good dressing of manure cannot be obtained, the ground is loosened and the roots thereby enabled to penetrate freely downwards. Our ground requires to be heavily manured, and this can be applied the more readily during the operation of trenching.

The system pursued here is to dig out two spits and to shovel the loose earth out after each. This is wheeled to the further

end of the ground. The bottom of the trench is then forked-up to the depth of 9 inches, and a good dressing of manure is put in. One spit and the loose earth from the next trench is put over this and another dressing of manure given, which is covered by the bottom spit and shovelling, and the operation is complete. In clayey soils with a stiff clay subsoil it is very desirable to work-in some stable manure during the operation. Sandy soils receive more benefit from cow manure. On the 26th the snow had cleared off on borders sheltered from the north-east and exposed to the sun. The ground was then in fair condition for planting a few second early *Potatoes*. Dalmahoy is the best as regards flavour, it is also the most certain cropper. Early Don has been tried this year. It has been more recently introduced, and has fully borne out the high character sent with it. It has, however, one serious fault—viz., its susceptibility to disease, which will always tell against its general cultivation. The earliest Potatoes are not planted-out yet, they having been planted in boxes and placed in a cool house to await more favourable weather.

Pricked-out *Cauliflower* plants that were raised on a hotbed some time ago. The soil used is light and not rich. It is necessary to be careful that any early vegetables sown under glass do not receive any check by removing them from one frame to another. We used to sow Celery for the earliest crop in boxes, and place them also on the hotbed; but the plants raised in this way invariably ran to seed, so that it has been discontinued. In clayey soils the plants would not have this tendency.

Peas have started away freely; but the young and tender growths seem to have received a check from the frosts. The usual protectors of galvanised iron wire netting have been placed over them to prevent the attacks of sparrows. Very often the seedsman is blamed for supplying bad seeds, when the sparrows had cleared off the plants directly the seed leaves have been formed. Lettuce, Radish, and all the Cabbage tribe are eagerly watched by them; even Onions are torn-up for mere amusement, as they drop the plants on the ground.

FRUIT AND FORCING HOUSES.

Pineries.—With increased light a higher temperature may be kept up both in succession and fruiting houses—that is, if the fruit which is now swelling is required early; otherwise a very high degree of temperature is not necessary, because equally good fruit can be obtained in a night temperature of 60° as in one of 70°, and as a rule the better-flavoured fruit is grown in the lower medium. One matter requiring more care than is usually bestowed upon it is the bottom heat. While this can be kept up to about 85° or 90° it is much better not to interfere with the bed, as turning it over has a tendency to raise it unduly. Up to 100° there is no danger of injury, but when the bottom heat rises over this the roots are sometimes injured. Many persons use test sticks for the bottom heat, but this is too uncertain to be recommended, and in all cases a thermometer specially adapted for the purpose should be used. If in any case the bottom heat should rise over 100° the pots must be raised in the bed to about half their depth, and gently shaken from one side to the other to form a space all round the pots. It is the safest practice to have the pots in a medium too low than too high, as, if the roots are not destroyed by the heat, the excitement is injurious. All our houses at present are kept at a night temperature of 65° except the sucker house, which is usually a few degrees lower. We have on previous occasions alluded to ventilation as being very important in this department. Pines do not show the effects of deficient ventilation so readily as some other plants, but they feel it quite as much, and show the effects ultimately in the leaves being drawn up instead of having that stocky sturdy appearance that well-grown Pines have. A little weak manure water is used for those that have fruit in its earlier stages swelling.

Peach Houses.—The stoning period, especially if the houses are forced early, is usually thought to be one of danger to the fruits, as at this time they are supposed to drop off; but when they are in vigorous health, and the roots sufficiently supplied with moisture without being overdone with it, not one will drop off. In forcing houses there are other agents at work that may at any time cause a check which would have similar results, such as neglecting to give air when the sun was acting strongly on the glass, or allowing draughts of keen frosty winds to blow through the house; but the careful cultivator is vigilant when extreme caution is required, and his trees are not likely to suffer. Even with pot trees, which are more liable to suffer for lack of moisture at the roots or from sudden changes of temperature, out of hundreds that we have grown during a series of years the small proportion that have had fruit drop during stoning are not worth notice.

A high temperature must not be kept up at stoning time. From 55° to 60° is quite high enough if the weather is cold. When stoning is completed, which will be as soon as the fruit takes the second swelling, the syringe may be vigorously applied, and the minimum temperature may be 65°, rising to 80°, or even 85° by day, shutting the house up early in the afternoon, and syringing the trees at the same time. The details of Peach management are comparatively easy: The growing shoots must be tied down to the wires, and they must not be too thickly placed; syringe daily, and fumigate with tobacco on the first appearance of aphis.

FORCING HOUSES.

In the pits or houses devoted to forcing plants for greenhouse or conservatory decoration it is necessary to maintain a genial temperature; 55° at night is quite high enough, taking care that there is a sufficient degree of moisture in the atmosphere. Most hardy-flowering shrubs of a deciduous character do better if the roots can be plunged in a mild bottom heat. Most of the Dutch bulbs—Hyacinths, Tulips, &c., are placed on shelves near the glass; in this position the leaves do not become drawn. Nothing looks worse than to see the leaves of a Hyacinth hanging down over the side of the pot before the flowers are fully expanded. Dielytra spectabilis is a very beautiful hardy herbaceous plant, and well adapted for forcing. Its long drooping spikes of pendulous bright rose-coloured flowers have an excellent effect in the greenhouse. A succession of strong healthy plants is kept up by striking a few cuttings annually. These can be obtained from plants growing in the open border; the shoots will soon be pushing through the ground, and must be taken off in a young state, potted singly in small pots, and the pots plunged in a gentle hotbed; they will soon form roots, when they must be gradually hardened-off and planted in the open border, or in beds of rich soil. The second season they will form fine large plants for forcing. Roses have not been so much infested with green fly as usual, but the bud worms have been numerous; they are readily detected by the leaves sticking together or curling up, and should be destroyed before they have time to spoil the buds. The house should be fumigated if green fly appears on any of the plants.

PLANT STOVE.

The last plants of Poinsettia pulcherrima have been removed, and placed where the pots can be kept dry, until it is time to cut the plants down. Achimenes and Gloxinias are grown in most places where stove plants are cultivated. The last named are the greatest favourites. We have shaken the corms of the latter out of the pots and repotted them, and placed the pots near the glass in the stove. Turfy loam, turfy peat, a little rotted manure, and some white sand answer well as a compost. The corms are potted in small pots at first, and after the plants have started freely they are repotted. Specimen flowering plants are not potted at this time; but those that are grown for their foliage may be potted at any time, for as the leaves constitute the beauty of the plant, it must be kept in vigorous growth to prevent them having a sickly appearance. Training climbers on the roof: as these are now starting into growth they must be looked over, and those most liable to be attacked by bug, such as Stephanotis floribunda, Hoya, &c., carefully washed. There are some climbers never attacked by this terror of the plant stove, and of these the best are the Allamandas and Clerodendron Balfourii; therefore, it would be well to plant such in preference to those that are invariably attacked.—J. Douglas.

TRADE CATALOGUES RECEIVED.

Harrison & Sons, Leicester.—*List of Choice Seeds.*

Hender & Sons, Bedford Nursery, Plymouth.—*Catalogue of Bedding Plants, Fruit Trees, &c.*

C. Sharpe & Co., Sleaford.—*Descriptive Catalogue of Farm Seeds.*

J. Coombes, Enfield, Middlesex.—*Catalogue of Cuttings of Geraniums, &c.*

Messrs. F. & A. Dickson & Sons, Chester.—*Catalogue of New and Select Farm Seeds.*

TO CORRESPONDENTS.

Books (*A. C.*).—Our volume of "Garden Plans, and How to Plant Them," is printing.

Contractor's Rights (*St. Clare*).—It is not possible to quote any general rule, but it is certain that a contract to lift old piping and relaying new does not entitle the contractor to carry away the old piping unless there is a clause in the agreement entitling him to do so.

Mr. Jesse (*A Lady*).—He died at Brighton in March, 1868, aged 88. There is a memoir of him in our No. 357, published April 9th of that year.

Salt, Soot, and Lime (*Agricola*).—They may be sown mixed or separate. The lime does not set free any ammonia from the soot, all being solid substances; and under any circumstances there is only about one part of ammonia in a thousand of soot.

Various (*D. Drake*).—The plant is Sweet-scented Coltsfoot (Tussilago fragrans). We never grew Little Heath Melon. Sow the Ten-week Stock for summer-flowering. The double Tulip petals decaying before fully open is probably caused by night frosts.

Cucumbers and Melons in Greenhouse (*E. H. E.*).—They will succeed if your house be kept warm—in fact, converted into a stove, as it may be during the summer months, by giving air moderately, and closing early so as to husband the sun heat. The plants will not answer trained to the side walls, but should have the shoots at 15 inches distance from the glass trained to a trellis, or at least be in such a position as to have abundance of light. Turfy loam light rather than heavy for the Cucumbers, and strong loam for

the Melons and firm, adding to each a fourth of well-rotted manure, and well incorporated. The soil should be a foot deep. Sufficient moisture may be kept up by frequent sprinklings of the paths, walls, &c., morning and evening, and the plants will require water so as to keep them from flagging. No stated times can be given for watering, as it depends upon the weather, growth of the plants, &c. Having no hotbed your best plan would be to ask some neighbour to raise the plants for you. If you raise your own sow in small pots and cover with a handlight within the house. When they have two or three rough leaves plant out, but it would be better to raise the plants in a hotbed, and transfer to the house when the plants are sufficiently grown. The boxes ought to have holes in them, and to be efficiently drained. The temperature should be 60° to 65° at night, 70° to 75° by day, with a rise from sun heat to 85° or 90° with air. (*J. F. S.*).—They will succeed fairly grown together, and require pretty nearly the same treatment, only the Melons must not be wetted overhead when setting, and when ripening they require to be kept dry both at the root and overhead. Read's Scarlet-flesh is the best of that section. Meredith's Hybrid Cashmere Green-flesh, and Golden Gem, are very handsome and good. They will answer well, particularly as your house is heated. Little Heath is the only kind we recommend for growing without heat.

Trailing *versus* Bush Ivy (*J. K.*).—The common and all Ivies that trail or climb are distinct from the bush or tree Ivies, the latter not climbing but forming tree or bush-like heads. They are for the most part varieties of the climbing kinds.

Lonicera aureo-reticulata (*Idem*).—It flowers in this country against a warm wall. The flowers are not unlike the common Woodbine, but are white and fragrant.

Echeveria metallica from Seed (*Idem*).—It may be raised from seed without a hotbed, being sown in pots or pans, and placed in a greenhouse, keeping moist, but the process is much slower and less certain than in a hotbed.

Camellia Leaves Variegated (*J. F. Smith*).—The leaves are very healthy, even the yellowest one. We do not know what will cause the plant to lose its variegation, it being a result in your case not of weakness but of vigour. Probably less rich soil and restricting the root action would give you a remedy, but in this we have no certain data. We have one or two plants affected in a similar manner, they, like yours, being very vigorous. We shall not pot them for a year or two, as we had some similarly affected, and by not treating so liberally as before the leaves have resumed their normal state.

Fumigating Greenhouse (*S. E.*).—Once a month will, as a rule, be often enough to fumigate a greenhouse, except under special circumstances, when it may be more frequently resorted to. In case of a severe attack of aphides, or when the pests have been allowed to get a-head, it is desirable to fumigate on succeeding evenings, and again in about a week if there are any insects apparent.

Beet Woody (*Idem*).—It may be a consequence of too early sowing of the seed, the plants having run or begun to seed, and the roots are hard, woody, and of bad colour; or it may be a consequence of growing in poor soil, its woodiness being accelerated by the drought of last summer. Richer ground and not sowing until the beginning of May ought to give you tender roots.

Lining a Cucumber Bed (*W. W.*).—There are but two ways, one to place the hot dung against the sides of the frame all round, the other to line from the bottom placing it against the sides, and this like the other should be of at least half-sweetened, as a safeguard against rank steam finding entrance to the plants.

Pruning Newly-planted Pyramids and Standards (*Idem*).—Do not prune the spurs, but cut the side shoots to within half an inch of their base, and shorten the leading shoots to 6 or 8 inches, but they may be cut less or more according to strength and required form of the tree. The leading shoot of the tree should be cut back to 13 inches. The standard trees we should cut back at least one-third the growth of last year, and the side shoots to within half an inch of their base, leaving the spurs entire, and shortening the leaders of the branches one-third their length. If they have nothing but young growths shorten them about a third, and thin out if the shoots cross each other or are crowded.

Red Spider (*Idem*).—It is one of the greatest pests to the gardener, being very small, scarcely visible to the naked eye; but when a plant is much infested by them the leaves present on the upper surface the appearance of being scorched. The colour varies; sometimes it is yellowish, at others brown, but generally a dull red. It may be found at most times in greenhouses and hothouses, especially those which have been kept hot and dry, mostly located on the under side of the leaves, feeding on their juices.

Wages at Market Garden (*W. A.*).—The wages vary with the locality, but in most cases a suitable man for rough work could be had for from 18*s.* to 21*s* per week, with lodging, or a house if a married man. An allowance for those in money is usually 2*s.* 6*d.* weekly. If you require labour for glass it will be for a good man at an advance of the wage quoted.

Pruning Neglected Orchard Trees (*Idem*).—Thin-out the weak and old branches, especially where very crowded, and those which cross each other, but do it to only a moderate extent—a little each year until they are comparatively thin. Severe cutting often results in exuberant growth. See what Mr. Robson says this week.

Depressing Hot-water Pipes (*W. P. H.*).—It is practicable to depress the pipes of No. 2 house 18 inches below the level of No. 1 house, but the pipes in No. 2 must not be depressed and again be raised to the level of the No. 1 house pipes. When once the water sinks to a lower level it should be taken by a gradual decline to the boiler. Neither will it answer to depress the pipe on entering No. 2 house, and after going along it again rise to the return of No. 1 house; but by having it as a return pipe in No. 2, and removing the return of No. 1, putting it so low as to act for the return of both, you may heat your second house satisfactorily, having an air pipe at the highest part of the flow in No. 1 house. By your projected plan the circulation would be impeded, but would, nevertheless, act in a sluggish sort of way, only you would need an air pipe at every rise just where the depression occurs, for nothing but air in the pipe will stop the circulation of the water.

Constructing Removable Greenhouse (*L. F. O.*).—If you place bricks on the surface of the soil, and then the wooden frame resting on the bricks, but not fastened to them or to the back wall, you could remove the house. In our "Greenhouse Manual" are fuller instructions for erecting a removable one.

Forced Crocuses Failing (*A. G.*).—The most likely cause of their failing is bringing in too much heat, they having also been kept much too wet. They require very gentle forcing, and to have a light airy position. The small corms formed above the old ones may be put out outdoors where they will attain a size for flowering. Lilacs, Azalea pontica, and Kalmias do not answer for forcing two years together. They require a year's rest. The Lily of the Valley may not have flowered because it had no flower buds, or it may have been brought on too rapidly.

Camellias and Azalea indica (*Idem*).—The Camellias which have made good new growth in heat ought to be continued there until the wood is well ripened and the buds set, after which they should be removed to a cool house, and kept cool and airy. If in small pots they may be repotted, taking care not to disturb the ball but merely loosening the sides, and warming the soil before use. Keep the Azaleas in heat until they are in flower, and then remove to a cooler house, returning to heat again after flowering, and keep in it until the growth is complete and the ball set, then place in a cool house. Bouvardias should be pruned after flowering, kept rather dry for a time, and in a moderate temperature, and when starting into fresh growth should be encouraged with a moist heat and be fresh potted, and after a good growth is made they should have a light airy position in a cool house.

Urine and its Ammonia (*C. Y.*).—One pound of sulphuric acid to 100 lbs of urine; it forms sulphate of ammonia. Seven pounds of sulphate of iron, or 14 lbs. of sulphate of lime might be substituted for the sulphuric acid.

Insect on Vines (*An Old Subscriber*).—The beetle injuring the young Vine shoots is the Curculio picipes, or Dark Weevil. Spread a sheet beneath the Vine, go at night with a lantern and shake the Vine. The weevils then feeding will fall upon the sheet.

Apricot Sucker (*Orleans*).—Your Apricot sucker with a straight stem of five-years growth will be a good stock for any of the Plums. If you want the tree for a dwarf-trained tree you must graft low, and for a pyramid it must also be worked low—about 6 inches from the ground. Grafting should be done just when the stocks are beginning to grow. If you bud them, July is the best time.

Ferns for Stove Fernery (*Eda*).—Moderate growers are Adiantum concinnum latum, Asplenium formosum, Davallia decora, D. parvula, Goniophlebium lericeum, Lomaria Herminieri, Niphobolus corymbifera, Platycerium alcicorne major, Platyloma flexuosa, Pteris cretica albo-lineata, P. tricolor, Polypodium pectinatum, Nothochlæna trichomanoides, Platycerium grande, Lastrea elegans, Drynaria diversifolia, Davallia dissecta, Blechnum nitidum contractum, B. cognatum, Asplenium fœniculaceum, Adiantum tenerum, Adiantum peruvianum, A. Santæ-Catharinæ, and A. tinctum. Where you have space you may introduce Adiantum Capillus-Veneris and A. assimile, both of which grow freely, and are very useful for cutting. Ferns for hanging baskets are Adiantum setulosum, Cheilanthes alabamensis, Davallia dissecta, D. decora, Drynaria quercifolia, Goniophlebium subauriculatum, Microlepia hirsuta angusta, Nephrolepis davallioides, N. tuberosa, Polypodium appendiculatum, Pteris scaberula, and Asplenium caudatum. Foliage plants are:—Croton Johannis, Dracæna Weismanni, Ficus Parcelli, Maranta rosea lineata, Paullinia thalictrifolia, and Aralia Veitchi.

Names of Fruits (*Beta*).—We regret not to be able to name the Apple you have sent.

Names of Plants (*J. E. S.*).—Sparmannia africana. (*Ignoramus*).—No doubt a Composite, probably a Helichrysum, but your description is insufficient. (*T. Edmonds*)—3, Polypodium 'hastatum;. 4, Nephrolepis acuta; 5, Adiantum Capillus-Veneris; 6, Adiantum (specimen insufficient); 7, Æschynanthus sp.; 8, Specimen insufficient, it may be an Hypoestes. (*Chesterfield*).—1, Parmelia saxatilis; 4, P. physodes; 2, Cladonia rangiferina; 3, Evernia prunastri.

POULTRY, BEE, AND PIGEON CHRONICLE.

DETENTION OF SHOW BIRDS ON SUNDAY.

Some readers may think that we are never wearied of remonstrating on this topic; we are not, and we have strong hopes that many committees which have been in the habit of including a Sunday in their show time will in future try to avoid it. Of course all will not, still we shall never tire of systematically showing-up such shows in our reports. We know the evil consequences must be, and are, great both to man and bird.

We are at a loss to know why committees will include a Sunday. We will put monster exhibitions like Birmingham and the Palace out of the question for the time, and only refer to smaller shows. We find repeatedly exhibitions held on the Friday and closing at 10 P.M. on Saturday, or held on the Monday in addition, and so on. Doubtless, if we asked the secretaries of these shows why they managed their dates so badly, we should have touching pictures drawn of such and such a show clashing, or Saturday being an early-closing day, or Monday the market day, or that by having such a date all the birds can come on from such and such an exhibition, and so on. These reasons may appear all very good, but they do not do away with the fact of a Sunday being so frequently included. The extra gain brought by the Saturday people or the marketers we should think was nearly consumed in the extra expenses which Sundays must entail—rent, gas, food, feeders, &c. The cost of these for a single day is no small item in a show's expenses, as we have good reason to know.

Then for the exhibitors' servants who so often have to stay out all the days of a show; surely to them the Sunday must be a hard time. What have they to do? Maybe they are in a strange town and know no one. We can only say they hardly have any alternative but to sit about in the public houses. We do not think it is fair to them to have to spend their Sunday away from home.

For the birds themselves it is often destruction. We can quote case after case of birds which have been totally ruined

for exhibiting and breeding by their long incarceration at a show and the excitement it causes, and the Sunday to them is only an extra day in which to come to harm.

Thus much for the evil. Now for the reason. We believe the reason why Sundays at many shows are included is simply to make the dates fix in with another show to avoid them clashing, and so causing both shows, or one of them, to come to grief. Exhibitors soon learn what birds are likely to beat them, and when two shows occur on following days they think, "Oh, Mr. So-and-so will be sure to send to one, and as I do not know which I shall not enter at either." Of course here we speak of the general run of amateur exhibitors, and after all without them the committees would often look queer when the reckoning-up day arrives. If this is the cause, one way out of the difficulty would be for committees to make their exhibitions more district or county shows. We are sure this would answer well. Kent has many such shows, and they do well. People who would not otherwise exhibit will send to their county show, and the exhibitors of the district know they have more chances of prizes, and enter accordingly.

There is no doubt but that there are too many open shows. The fact of their being open to the United Kingdom does, we know, keep local and county exhibitors from patronising them. Whereas if the competition were restricted to the county or district the committee could make such a choice of days as would answer all purposes without the Sunday being included, and their entries would be more, for they would get dozens of entries from those who would otherwise not have sent one bird. We merely mention this as a suggestion, which we have long thought would be one way out of the difficulty.—Amicus.

THE EXHIBITION DORKING.—No. 10.

BY T. C. BURNELL.

The Dark Dorking.—Amongst the different breeds of Dorkings, the Dark or Coloured Dorking, on account of its superior size, has always been the favourite. This variety was originally called the Grey Dorking, then the Coloured Dorking, and now is generally known by the name of the Dark Dorking, to distinguish it from the Silver-Grey variety.

The first and most important point in a Dorking is the shape. Most beginners are apt to think that five toes on each foot, and a freedom from leg feathers and crest, are all that are required to make a good bird. Not so; it is the peculiar shape which makes the Dorking, the square, deep, and massive body, and the full chest. The breast bone should be long and deep to allow plenty of room for putting on flesh, as it is the Dorking's breast which gives it its pre-eminence for the table. The back should be very broad and flat at the shoulders, and should gradually narrow to the hips; the legs should be short and stout, and with plenty of bone, as the leg is a good criterion of frame and capacity for putting on flesh; the thighs should lie close to the body, and not be carried atilt-wise, as in the Cochin. The above points apply equally to all Dorkings.

I will now state what is generally considered requisite in a show bird of the Dark variety, and first for the cock: Head of a good size, eye large and dark in colour, earlobe red, wattles long and pendulous, comb either single or double. If the comb is single it must be perfectly upright, quite straight, free from any excrescences at the sides, and evenly serrated with about six or seven sprigs; if rose-shaped (double) it should be close and firmly fixed on the head, square in front, flat at the top with the exception of numerous little sprigs, the sides straight and even, and the whole comb narrowing behind into a distinct point. The comb in either case should be of a good size, but without the least tendency to coarseness. Rose-combs in Coloured Dorkings have lately become very scarce in the show pen, and not more than a dozen pens, I think, have been seen at the Crystal Palace Show for the last five years. They are evidently not popular, the reasons doubtless being that they are more difficult to find in perfection, t.. they invariably become coarse and ungainly in the second year, and that they are more open to being tampered with than the single combs, this latter in my opinion being a serious objection.

Rose and single-combed birds may be bred together, and a proportion of both will be found in the chickens; but this plan should be avoided if possible, as coarse and ugly combs are sure to be the result, and neither comb will become fixed in the strain. In a pen of birds for exhibition of course the combs must match; if a rose-combed cock and a single-combed hen were shown together certain disqualification would be the result. Sometimes we find a bird with a comb something between the two—that is, a single comb in the front part expanding into two combs as it were in the middle, and joining again at the back, so as to form a large hollow. These "cup" combs as they are called will not now pass muster, and are only fit for the farmyard. The neck hackle should be very full, and should fall naturally, the feathers not twisting over one another or rising in a hump behind the neck; tail very large and full, with the feathers unusually broad and arching, and the saddle hackles very plentiful; legs short and perfectly straight; toes, five on each foot, the fourth and fifth or hind toes being very distinct, and each growing separately from the leg, the fifth toes turning upwards; the front toes long, straight, and well spread, and the spurs set well inside the leg, in fact almost pointing at one another.

Formerly the colour of a Coloured Dorking cock was immaterial, but of late years, since a separate class has been made for Silver-Greys, this is not the case. The hackle should be clouded or striped with black, and not be white as in the Silver-Grey. The saddle, too, should be clouded, and the shoulders of a darkish tinge. The accompanying illustration (fig 48.), drawn from a cockerel of my own breeding, gives a very good idea of the colour required in a Dorking cock to match the Dark hens which are now so fashionable. A cock will pass muster if he is not so darkly striped in the neck hackle; but a Coloured Dorking cock with almost white hackle and shoulders is not the proper mate either for the show pen or breeding for a Dark hen, any more than a Silver Duckwing Game cock is a match for a Brown Red Game hen. To a critical eye one is quite as objectionable as the other.

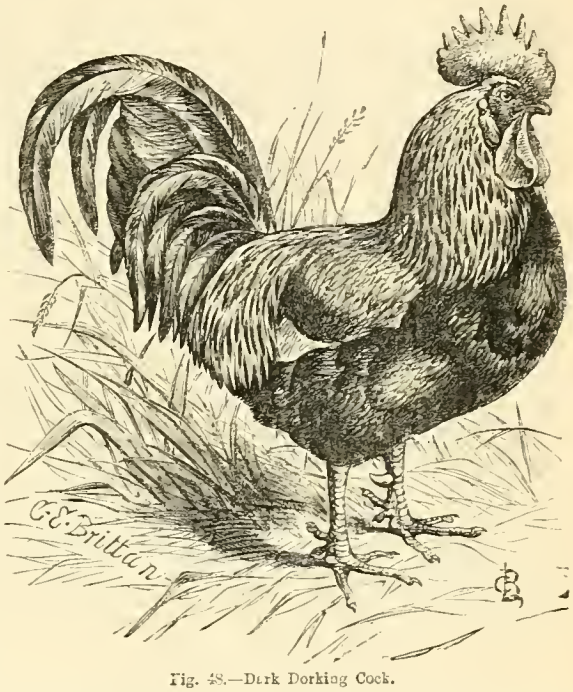


Fig. 48.—Dark Dorking Cock.

Occasionally we see cocks showing a good deal of red or chestnut on the shoulders. These will pass with a Dark hen and often breed very good pullets, but they are not so suitable in my opinion as cocks only showing black and grey. It is commonly thought that white in the breast or tail is a bad point. This is a mistake, and arises from confusing the colours of the Dark and Silver-Grey varieties. A little white in the breast of a Dark cock or on the thighs is no detriment, nor is white in the tail; in fact, I have never seen a really good Dark cock without white in the sickle feather, a "gay" sickle as it is termed. My first-prize cock at the Palace and first cockerel at Birmingham this year both had white in the sickles, as also had my second Palace and cup Birmingham cock the year before, and I have yet to learn that it is any disadvantage. Of course, a very white breast or tail is a disadvantage; but it is no disqualification if a bird is good in other respects, and often appears after a moult in a bird which was previously quite free from it.

I have said a good deal about the white in the tail, as the only results of rejecting gay-sickled birds would be to reduce the size of Dorkings by making the choice of show specimens much more difficult, or else to introduce the plucking-and-trimming system, which is such a curse to many other breeds. The colour of the legs and feet should be white; the colour of the flesh and skin of a fowl is always of the same tinge and colour as the feet. So in the Dorking, which is essentially the table fowl, it is very important that this should be white.

I have now mentioned most of the necessary points, and to assist beginners will now mention the most common defects. Many Dorkings have undoubtedly been crossed some time with other breeds, such as Cochins or Malays, but such crosses can nearly always be detected. Long legs and deficiency of chest

are certain signs of a cross, as also are yellow beaks and toe nails. A small tail, too, should be looked upon with suspicion, as a large and flowing tail is inseparable from a pure-bred Dorking. The comb in the cock sometimes falls to one side or lops behind; both these are signs of lack of condition or health, and are ruinous in the show pen, as also is a bad twist or bend in the comb, though a slight turn or "thumb mark" in the front is not so important as in a Spanish cock. A crooked leg is not at all an uncommon defect, and should be carefully looked to in buying a bird; but the feet as a rule are where the most attention is required, as not only are corns found under the feet, but the hind toes are frequently badly set on. The big front toes too often curve inwards, and the front toes are sometimes set too close together instead of being well spread. These two last are bad defects. Spurs are found outside too high up, or at the back of the leg. This blemish is fast becoming common, and requires to be looked to. Any dark tinge or sootiness in the feet is certain disqualification, as also are feathered legs.

AN EARLY AND CONSTANT SUPPLY OF EGGS.

The following question has often given rise to anxious thought and consideration:—What is the best food to produce an early and constant supply of eggs at the smallest cost? Ground oats, barleymeal mixed with fine pollard, poultrymeal, ground maize, &c., have each and all had a fair and patient trial as soft food for morning feeding, with whole buckwheat, barley, maize, oats, &c., for the last feed. The result has never been satisfactory. This last autumn I have been feeding some bullocks on wheat with white peas ground and mixed together as their principal food, with the best possible results; and when I made up my pens of fowls this season I determined to use the same kind of mixture (ground wheat and peas), giving it to them as their morning feed, made as stiff as possible overnight rather than just before feeding. This practice is founded upon the same principle as pastry made the day previous to baking is better than that made and put into the oven immediately. For the last feed I give the fowls whole wheat.

Now for the result. They have exceeded my most sanguine expectations in giving me an early, abundant, and constant supply of eggs beyond anything I have before experienced. During the severe weather of December, when the ground was covered with snow, I think I had more eggs laid than usual. Another result of early eggs has been a brood of chickens on the 31st of January, and they are doing remarkably well in an open coop on the ground, and fed in the same way as the fowls.

In conclusion, I now come to the cost. Rivett wheat can be bought at 38*s.* per quarter of 504 lbs., white peas at 42*s.* per quarter of 504 lbs., grinding 3*s.* per quarter; consequently I purchase a food under 10*s.* per hundredweight containing 18½ per cent. of flesh-forming substances. If these facts interest your readers I will tell them how I built my fowl house, the kind of run they have, &c.—J. P. Miller, *Enfield.*

HOUDANS AS LAYERS.

I have always advocated this breed as good although not as very early layers, but I am utterly at a loss to account for mine this year. I have not had (February 27th) one egg from them as yet. I have thirteen birds—seven old hens (that is, of 1873), and six pullets of various hatchings in 1874. My house is warm, they have a good run of five acres, are in capital condition, and yet this is the state of the case. Besides these I have four common barndoor hens for sitting, and every one of these is laying. Can anyone explain the cause of this? Is it to be attributed to the cold and wet season? for if so it interferes a great deal with one's estimate of the value of the Houdan as a layer. Last year at this time I had an abundant quantity of eggs, and now not one. I see symptoms of some of them approaching the laying season—combs enlarging and turning red, &c., but it is rather hard to have to wait until March for them. Has any Houdan breeder any similar experience, or can any "cunning man" give any solution of the puzzle?—D., *Deal.*

MELTON MOWBRAY SHOW OF POULTRY, &c.

On September 25th, 1862, Melton held its first Show of poultry. We have before us our second volume, in which we find a full account of that Exhibition; after that the good people of Melton went to sleep and slumbered quietly, dreaming we hope pleasantly. This, however, was not to go on for ever like our friend the brook, for after a time they awoke and once more set to work over a poultry show. The Exhibition which closed on Friday evening last was their first winter Show, and we congratulate the Committee on their Exhibition. It was held in the Corn Exchange, a room admirably adapted for the purpose in every way. 328 pens of poultry, Pigeons, and Rabbits of more than ordinary quality made a smart little Show. The entry fees amounted to £2 or £3 more than the prizes given, which was a good beginning, and we hope the Show consequently paid well, and that the schedule for next year will be more extensive and the prizes larger. The Rev. G. F. Hodson awarded the prizes, and his judging gave in most cases great satisfaction. In looking over the prize list of this Show held last week, and that in 1862, we can only find one name occurring in both, we allude to Mrs. Woodcock of Rearsby, and that lady exhibited then as now Buff Cochins. We like to hear of people adhering to their first loves; but this utter absence of the same names in two shows held barely thirteen years apart shows how great changes do occur in the poultry fancy.

Dorkings came first on the list, six pens; nothing first-class. The winning pen, however, was of good Coloured birds. *Cochins* came next with two classes. In Buffs the winners were all good. We thought the third-prize pair might have gone in between the first and second, but there was not much wrong. 10 (Winwood), a good cock; 12 (Woodcock), a nice hen. In Cochins of Any other variety Whites won first. They were wonderfully good and well shown. We never remember seeing a better pair for colour. Second and third-prize pairs were good, and several other capital pens were in this class. Dark *Brahmas* made a good show. The first-prize pair we liked immensely; second and third also good. We should have liked to have seen a few high commendations in this class. In Lights the first were well ahead. With the exception of the winning pens this collection was poor. *Game*, Black and Brown Reds, mustered well, and the quality was very good. We liked the third-prize pen very much, and thought it might have stood higher, though the first and second were both smart pens. 48 (Bell) contained a capital hen. The Variety Game class was poor, and only first prize was awarded. *Spanish* were admirable; the winners well placed and really good. Spangled *Hamburghs* mustered seventeen pens, first going to capital Golds and second to Silvers. Pencilled Hamburghs were good, especially the Golden. *Houdans* were one of the best classes in the Show. The first-prize pen truly grand, and in admirable condition; second also good. 119 (Valance), a grand hen. We preferred this pen for third place almost. Of the six noticed pens four came out of Kent. Game *Bantams* were good, Mr. Anna' second and third-prize pairs were cheap at catalogue price of £2 2*s.* each. In the Variety Bantam class Laced were first, good Blacks second and third. 148 (Woodcock), good Japanese. The "refuge" was a very large and varied class. Splendid Crêves were first and third, and good Golden Poles second. 153 (Kew), lustrous Black Hamburghs; 155 (Cross), a grand Crêve hen; 161 (Lias), fine Silver Polands; 162 (Richardson), good Malay cockerel. The Selling classes were large and the quality very fair, good Game, Cochins, and Spanish winning the chief prizes. *Turkeys* and *Geese* were small but good classes. Rouen and Aylesbury *Ducks* capital, the former as usual the most plentiful.

Pigeons were only small classes. Mr. Yardley sent a good team of birds. One of the best classes was the *Archangels*, and we were glad to see a class for this most beautiful breed, which generally gets such bad treatment at the hands of show promoters. The first pair were lustrous, and a bargain at £2 2*s.* *Fantails* were good, both prizes going once more to Newark. *Jacobins* only a poor lot. The Variety class was admirable. There were twenty-one pens of really good birds. The winning *Trumpeters* were fine, but for second place we should have gone to 272 (Allen), Yellow Dragoons. There were some cheap pairs in the Sale class also. The awards were as follow:—

Dorkings.—1, W. H. Crewe, Etwell, Derby. 2, J. Rippin, Melton Mowbray. 3, S. W. Hallam, Whitwick, Leicester.

Cochins.—*Cinnamon or Buff.*—1 and 2, Mrs. Allsopp, Worcester. 3, H. Feast, Swansea. *hc*, Mrs. Woodcock, Leicester. *c*, E. Winwood, Worcester. *Any other variety*—1, R. S. S. Woodgate, Pembury. 2, C. Wilson, Langar, Elton. 3, Rev. R. Storey, Derby. *hc*, A. F. Faulkner, Thrapstone; P. Passmore, Northampton; H. Feast. *c*, Mrs. Goodall, Melton Mowbray.

Brahmas.—*Dark.*—1, Dr. J. Holmes, Chesterfield. 2, L. C. C. R. Norris, Trumpington, Cambridge. 3, J. H. Turner, Sheffield. *c*, J. Gunn, Coalville, Leicester. *Light.*—1, R. E. Horsfall, Grassendale Priory. 2, C. Wilson, Langar Elton. 3, N. Feast.

Game.—*Black or Brown Reds.*—1, W. T. Everard, Hatton Grange, Ashby-de-la-Zouch. 2, J. Mee, Ashby-de-la-Zouch. 3, J. Jenkins, Eltham. *hc*, E. Bell, Burton-on-Trent; J. Jenkins; J. Stokes, Melton Mowbray. *Any other variety*—1, E. Bell. 2 and 3, Withheld.

Spanish.—1 and 2, — Allsopp. 3, E. Winwood, Worcester. *vhc*, M. Brown, Ab Kettleby, Melton Mowbray. *c*, M. Brown; S. W. Hallam, Whitwick.

Hamburghs.—*Gold or Silver-spangled.*—1, Mrs. Blakeman, Tettenhall, Wolverhampton. 2 and *c*, S. W. Hallam. 3, J. Ward, Ashby-de-la-Zouch. *hc*, T. H. Turner, Sheffield. *Gold or Silver-pencilled.*—1 and 3, C. Judson, Peckham. 2, S. W. Hallam. *hc*, A. F. Faulkner, Thrapstone. *c*, J. Ward.

Houdans.—1, W. Dring, Faversham. 2, F. Lake, Rodmersham. 3, S. W. Thomas, Sketty, Swansea. *vhc*, W. H. Crewe, Etwell, Derby. *hc*, W. Cutlack, jun., Littleport, Ely; Mrs. K. R. Valance, Sittingbourne. *c*, R. A. Boissier, Pensburst.

Bantams.—*Game.*—1, G. Bell, Burton-on-Trent. 2 and 3, T. W. Anna, Clapham. *hc*, J. Richardson, Loughborough. *c*, Herne & Hockaday, St. Austell. *Any other variety.*—1, Mrs. Wootton, Mapperley. 2, R. H. Ashton, Mottram, Manchester. 3, Wingfield & Andrews, Worcester. *hc*, Mrs. Woodcock. *c*, J. T. Hinks, Humberstone; Mrs. Wootton.

Any other Variety.—1, W. Cutlack, jun. (Crève-Cœur). 2, G. W. Boothby (South Golden Poland). 3, W. Dring (Crève-Cœur). *vhc*, Mrs. Cross, Brigg (Crève-Cœur). *hc*, M. Kew, Market Overton (Black Hamburghs); G. Lias, Par Station (Silver Poland); J. Richardson, Loughborough (Malays). *c*, J. Bailey, Melton Mowbray (Black Hamburgh).

Selling Class.—*Cock or Cockerel.*—1, Mrs. Allsopp (Cochins). 2, W. & J. Honey (Stanstells Game). 3, M. Kew, Market Overton (Malays). *hc*, J. H. Turner, Sheffield (Brahma); T. Wild, jun., Burton Lazars. *c*, W. Boothby (South Golden Polands); J. T. Parker, Northampton; H. Yardley, Birming-

ham; J. F. Hinks, Humberstone. *Hens or Pullets.*—1, W. S. Black, Saxby (Game). 2, Mrs. Allsopp (Spanish). 3, Mrs. Nicholson, Sheffield (White Cochins). *hc*, E. Snell, Barrowden. *c*, G. W. Boothby (South Gold Poland); H. Yardley; C. Ridge, Melton Mowbray; S. Pollard, Sleaford.

Turkeys.—1, J. Rippin, Melton. 2, E. Snell. 3, M. Kew.

Geese.—1, M. Kew. 2 and *hc*, J. Rippin. 3, J. G. Barker, Holwell.

Ducks.—*Aylesbury.*—1 and *c*, Mrs. Wootton. 2, W. H. Crewe. 3, E. Snell. *Rouen.*—1, Miss E. Wingfield, Market Overton. 2 and *hc*, I. Wright, Cold Overton. 3, T. H. Turner. *Any other variety.*—1, H. Yardley. 2, Hon. Mrs. Molyneux. 3, S. Black.

PIGEONS.

Carriers.—1, L. Allen, Southwark, London. 2 and *hc*, H. Yardley.

Pouters.—1, L. Watkin, Northampton. 2, J. Atkins, Bedford. *c*, H. Yardley.

Tumblers.—1 and 2, H. Yardley.

Fantails.—1 and 2, J. F. Loversidge, Newark. *hc*, E. Snell; W. Gamble, Thorpe Satchville.

Jacobins.—1, W. Hasledine, Gartree Hill. 2, S. Lawson, Preston.

Archangels.—1, H. Brown, St. Austell. 2, W. Latham, Melton Mowbray. *hc*, H. Yardley; Wingfield & Andrews.

Any other Variety.—1, W. Gamble, Thorpe (Trumpeters) 2, T. Chambers, Northampton. *vhc*, H. Yardley; L. Allen, London (Yellow Dragoon). *hc*, W. Tedd, Erdington (Black Magpies, Red Magpies, and Blue Swallows); F. F. Pulley, Oxford (Ice and Magpies); H. T. Hinks, Humberstone; F. S. Barnard, Tottenham; — Hardstaff, Melton Mowbray (Ice). *c*, H. Yardley; H. H. Brown, Melton Mowbray (Ice).

Selling Class.—1, J. Osbond, Northamptoo (White Dragoon). 2, F. Sabbage, Northampton. *hc*, H. Yardley; F. S. Barnard, Tottenham (Magpies); W. Gamble Thorpe; R. Gill, Melton Mowbray (Trumpeters). *c*,—Andrews, Melton Mowbray; W. Gamble (Trumpeters).

RABBITS.

Greatest Length of Ear.—1, Mrs. Pickworth, Moulton Marsh, Spalding. 2 and *hc*, F. Canner, Leicester.

Heaviest Weight.—1, C. Payne, Melton Mowbray. 2, W. Haseldine, Gartree Hill.

Any Variety.—1, W. Priestman, Melton (Silver-Grey). 2, H. J. Hinks (Silver-Grey). *hc*, F. Canner (Dutch); A. W. Whitehouse, Northampton (Silver-Grey).

BURNLEY POULTRY SHOW.

The first annual winter Show was held in the Literary Institution on Saturday last, and proved by far the most extensive of any that has ever been held in Burnley; and considering the amount of money offered, the energy and management of this small knot of fanciers have received such appreciation at the hands of the exhibitors as seldom falls to the lot of a committee, many of the classes counting near fifty entries each; and it is but fair to state that few of the old fanciers of the district would venture to put their shoulders to the wheel, and the affair was managed almost entirely by new beginners. On account of the entries being greater than was anticipated the building proved far too small to allow sufficient room for the large number of visitors, and it was with great difficulty that the birds could be examined on account of the crush; and the pens, which were Turner's, being placed two tiers high, the light in the lower stage was anything but good.

There were seven classes for poultry, *Game* heading the list, and the class a pretty good one; the first and medal for the first four classes going to capital Black Reds. The second were Brown Red chickens, the cockerel grand in all points, but the pullet a little faulty in condition; the third being Piles, the cockerel in this pen being a fine substantial bird. *Brahmas* were also a fair class, Darks winning in all cases, Mr. Pickles' three pens being empty. *Hamburghs* were mixed classes, the Spangles in one and Pencils in the other. In the first Silvers were first and third and Gold second, the first being a pen good all round. In Pencils Silvers won all the prizes, and these were really good, Golden proving very poor. *Bantams* had two classes, the first of which was for Black and Brown Red Game, Black Reds winning first and second, and Brown Reds third, the latter grand in colour, but a little faulty in eye. In the next class Piles were first, Duckwings second, and Piles third, the first of rare quality; and the cup for the best cock in the Show was awarded to this bird, but proving to be the property of the donors it was very generously declined by Messrs. Bellingham & Gill, and subsequently awarded to the most perfect La Flèche cock we have ever seen. The gold medal for the best pen in the last three classes going to a good old pen of Buff Cochins shown by Mr. Walker in the Variety class; the second in this being La Flèche; and third Dark Grey Dorkings, the only fault of which was a squirrel tail in the cock. Many excellent pens of Polands, Spanish, Black Hamburghs, and Bredas being highly commended.

In Pigeons the *Carrier* cocks were a grand class, the first a Dun in prime condition, very good in style, carriage, beak, and beak-wattle, but a little short of eye-wattle; second a very large and much younger bird, that must some day reach the summit of the fancy if no ill befall it; and third a good smart Black; twelve others being noticed. Hens were a very good class, many birds of extraordinary merit losing only for want of condition. The first, a Dun good in every point, won also the cup for the best bird in the Show, Antwerps excluded; the second was a grand Black. By some mistake two Yellow Dragoons were shown in this class. In *Pouters* the first was Blue, in fine order and good show trim; the second Black, and third Blue; several good Whites showing badly. *Barbs* were not a good class although numerous, the first a grand Dun cock, a little out of order; second a Black, in good bloom; and third a Dun hen. Short-faced *Tumblers* were very good, almost all being noticed, the first an Almond cock all the way from Scotland, very good all round, and most beautifully broken in feather, this being claimed at the catalogue price of £8 8s.; second came a very good Blue Baldpate; and third a Kite of extraordinary head properties, and very small. Long-faced Tumblers were not good as a class, but the winners about perfect; first a Yellow Mottle, second Black Bald, and third Red Mottle. *Jacobins* were a grand class, the first and second Reds being extraordinary in hood and chain; the third Yellow, also very good, but a little rough on one side of the rose. Excepting the winners the *Turbits* were poor, the first Blue, second Red, and third Silver. Excepting the noticed birds the English *Owls* did not come up to our expectations, and only the first was really good in all points. Short-faced *Antwerps* were a grand display of thirty entries, and we may venture to assert that this class, as all the Antwerps, are coming to be better understood, for few birds were shown but that were of some degree of excellence, and this county and the neighbouring one of Yorkshire being the strongholds of the variety, the competition was very keen indeed. In the above-named class the first was a Silver Dun, perfect in all points except the eye, which seemed to have faded since the bird was shown at Bradford in October last; but let this be as it may, they are certainly faulty now. The second lost a little in the frontal part of the head, and was also Silver Dun; the third was also a Dun, and we noticed one Blue Chequer with a grand head and colour, but sadly out of condition. Long-faced Antwerps were not so numerous, but much more even in quality, and mostly noticed. The first was a grand Red Chequer, second Blue Chequer, and third a Red Chequer hen. Few of the Short-faced of 1874 were up to the requirements of the standard, many being too long; but the Red hen to which the first award was made was a grand specimen; the second was a very promising Silver Dun cock; and third also a Dun. There were seventy-eight entries in the two classes of *Dragoons*, but we failed to find half dozen of the so-called London Fancy. There were a good lot in old birds; most of the birds were noticed, but some of these were too long, being near 1¼ inch from the centre of the eye. The first was a Blue hen of grand proportion and colour; second a Blue cock, a little too long and strong, but good in all other points; equal second a Red cock; third and equal third were Blue cocks; twenty others being noticed. The young birds of last year were badly placed as regards the light, and the awards were made with difficulty, the first going to a handsome Yellow, and the second and third to Blues. In the Variety class the first was a Foreign Trumpeter, second a Black African Owl, and third a Fairy Swallow. In the Selling class the first was a very cheap Silver Dun Antwerp, second an Agate, and third a Red Jacobin. There were some likely birds in the class for Homing birds, but none that fairly answered the requirements of that variety. The point cup was won by Mr. Sefton with twenty-four points.

Canaries had a few classes, but there were not large entries, the winners in the Clear *Norwich* classes being of the highly-coloured variety. In *Belgian* there were but four entries in two classes, but the first-prize birds were very good, and considering the severity of the weather they showed well. In the next class all were noticed. The first was awarded to an evenly-marked four-pointed Yellow Yorkshire bird, and second to a Ticked Manchester Coppy, an Even-marked Yorkshire and several Ticked Norwich being highly commended.

Game.—1 and Medal, E. Aykroyd, Eccleshill, Leeds. 2, R. Payne, Burnley. 3, S. H. Leech, Preston. *vhc*, W. Ormerod. *hc*, O. Folds; J. Fortune; J. & E. Prince. *c*, J. Nelson.

Brahma.—1 and 2, T. F. Ansdell, Cowley Mount, St. Helens. 3, C. Holt, Rochdale. *hc*, A. & J. Robinson; A. Bamford; G. Barnes; W. Hargreaves (2); W. Harvey. *c*, J. Helliwell; T. Pye.

Hamburghs.—*Gold or Silver-spangled.*—1, R. Watkinson, Thorneyholme, Burnley. 2, T. Cropper, Bacup. 3, J. Ashworth, Burnley. *hc*, J. Ashworth (2); H. Stanworth. *Gold or Silver-pencilled.*—1 and 3, R. W. Bracewell, Earby. 2 and *hc*, J. Ashworth.

Bantams.—*Black or Brown Red Game.*—1, J. Nelson, Hexham. 2, E. Walton, Hornclife, Rawtenstall. 3, T. Barker, Burnley. *vhc*, C. Cronshaw. *hc*, T. Whittaker. *c*, A. C. Bradbury. *Any other variety.*—1 and Cup, Bellingham and Gill, Burnley. 2, J. Nelson. 3, J. Riley, Accrington. *vhc*, Bellingham and Gill. *hc*, W. Atkinson; J. Walker; J. Halstead; F. Holt; T. Dawson; S. Lawson. *c*, T. Barker.

Any other Variety.—1 and Medal, J. Walker, Spring Mount, Rochdale. 2 and Medal, E. Walton. 3, J. Ashworth. *hc*, J. Helliwell; J. Ashworth; H. Wilkinson; G. Barnes; J. Nowell; J. Loder (2).

PIGEONS.

Carriers.—*Cock.*—1, J. Walker. 2, W. Sefton, Accrington. 3, E. C. Stretch, Ormskirk. *vhc*, J. Walker; J. Stanley. *hc*, H. Crosby; J. Stanley; H. Yardley; J. Gardner; W. Sefton (4); W. Harvey. *Hen.*—Cup, 1, and 3, J. Walker. 2, J. Stanley. *hc*, R. W. Bracewell; J. Stanley; J. Gardner; E. C. Stretch; W. Sefton (3); W. Harvey. *c*, W. Sefton.

Pouters.—1 and 3, W. Harvey, Sheffield. 2, J. Richmond, Oswaldtwistle. *c*, W. Hardcastle.

Barbs.—1 and 3, W. Harvey. 2, J. Stanley. *hc*, J. S. Collier; T. Pincock; J. Stanley. *c*, H. Crosby.

Tumblers.—*Short-faced.*—1, W. Brydone, Dunse. 2, T. & W. Oddie, Brierfield, Burnley. 3, J. M. Kidd, Edinburgh. *vhc*, J. Gardner; W. Sefton. *hc*, Powell and Crane; A. & W. H. Silvester; J. Ford; T. Charnley; H. Yardley; J. Gardner. *c*, J. Kidd; A. & W. H. Silvester; J. Ford; J. Hawley.

Tumblers.—*Long-faced.*—1, J. Ford, Monkwell Street, London. 2, Waddington & Booth, Burnley. 3, A. & W. H. Silvester, Sheffield. *hc*, J. Ford (2); T. Newell. *c*, J. Cargill; J. Hawley.

Jacobins.—1 and 2, T. Holt, Bradford. 3, W. Brydone. *hc*, G. E. North N. Smallpage, jun.; J. Ingham (2); J. Cargill; J. Gardner; J. Young; J. Richmond; W. Brydone; W. Harvey.

Turbits.—1 and 2, T. S. Stephenson, Newbegin, Beverley. 3, W. Brydone *hc*, H. G. Poole; A. & W. H. Silvester; J. Gardner; W. Sefton (2).

Owl.—*English.*—1, J. Gardner, Preston. 2, S. Lawson, Preston. 3 J. N

Harrison, Derby. *hc*, J. Ingham; H. Creaby; E. Lee (2); A. Warburton; J. Young; W. Brydone; T. & W. Oddie; S. Lawson.

ANTWERPS.—*Short-faced.*—1 and Cup, R. Brierley, Fishpool, Bury. 2 and 3, F. Woodhouse, Blackburn. *hc*, J. Rushworth; C. F. Copeman; J. S. Collier; S. Fletcher; G. Thicket; J. Parker; Waddington & Booth (2). *c*, J. Stanley; J. Gardner; W. Walton (2).

ANTWERPS.—*Long-faced.*—1 and 2, J. Robertshaw, Thornton, Bradford. 3, J. Lister, Keighley. *hc*, H. G. Poole; R. Brierley; J. Lister; J. Powell; H. Stanworth; H Mitchell; J. Hawley.

ANTWERPS.—*Short-faced.*—*Young.*—1, J. Lister, Keighley. 2, J. Gardner. *hc*, Tordoff & Wilkinson; A. Smith; B. Cressley; R. White.

DRAGOONS.—1, 2, and 3, W. Sefton. Extra 2, H. Yardley, Birmingham. *vhc*, W. Sefton (2). *hc*, S. Cliff; F. Eastwood; Waddington & Booth; T. Charnley; J. Stanley; J. Gardner (5); T. Smith; T. Hartley; A. Boote; A. McKenzie (2); W. Harvey. *c*, J. R. Crompton; B. Edmondson.

DRAGOONS.—*Young.*—1, H. Crosby, Sale. 2, A. Beote, Crewe. 3, J. Robertshaw. *vhc*, J. Gardner. *hc*, Waddington & Booth; J. Stanley; J. Robertshaw; A. McKenzie (2).

ANY OTHER VARIETY.—1, W. Harvey. 2, W. Brydona. 3, J Richmond. *vhc*, A. & W. H. Silvester; A. A. Vander Meersch. *hc*, G. E. North (*c*); T. Charnley; J. Young (2); A. A. Vander Meerach; W. Sefton (2); W. Harvey; W. Sutcliffe. *c*, G. E. North; A. & W. H. Silvester; W. Sefton.

SELLING CLASS.—1, J. Hawley, Girlington, Bradford. 2, W. Brydona. 3, W. Markland, Deane, Bolton. *hc*, A. & W. H. Silvester; —Fletcher; T. Charnley; W. Walton; T. Hartley; J. Bishop. *c*, J. Stanley; W. Sefton; R. Crompton; R. Hutchinson.

CANARIES.

NORWICH.—*Clear Yellow.*—1, J. Stevens, Middlesborough. 2, W. Smith. *hc*, W. Woodward, jun.; J. Jackson. *Clear Buff.*—1, W. Smith, Birmingham. 2, W. Woodward, jun. *hc*, J. Stevens; J. Jackson; J. Shacklet on.

BELGIAN.—*Clear Yellow.*—1, T. Ridiog, Bacup. 2, W. Fletcher, Burnley. *Clear Buff.*—1, W. Fletcher. 2, T. Riding.

TICKED.—*Any variety.*—1, J. Nutter, Burnley. 2, J. Shackleton, Rochdale. *hc*, J. Nutter; J. Stephens; W. Woodward; J. Shackleton (*2*); W. Smith.

JUDGES.—Mr. E. Hutton, Pudsey; Mr. W. Cannan, Bradford.

CRYSTAL PALACE BIRD SHOW.—No. 1.

THE Show of 1875 has certainly surpassed the most sanguine expectations of all concerned. What the Show was a few years compared to the one I am now reviewing is well known to those ardent fanciers who knew the Palace exhibitions in their earlier days. The magnitude to which the Show is likely to attain in the future is a matter of conjecture, but if it makes such rapid proportionate strides in the next five years as it has done over the previous year's exhibition (1874), it will require a marquee double the size to hold the birds. The one used for the Exhibition just held was nearly 50 yards long. Upon entering the tent and taking a bird's-eye view of the lengthy double tiers of stages ranged along each side, and likewise those down the centre, and finding it impossible to fully satisfy my mind in examining the whole of the birds in one day, I contented myself with the Canary portion of the Show during the first day, and paid a visit the following day to examine the British and foreign varieties. How the Judges worked through their labours is best known to themselves, but the work was done. Some Judges have a very happy knack in getting through their work. What it would have been if point-judging, recommended by a certain N.O.A., had been adopted is not for me to say. All I know is, that upon the opening of the Show at twelve o'clock on the first day (Saturday) I was favoured with a catalogue of prizes, faultless as to the completion of it, containing the entire returns. I did not make myself inquisitive as to how Mr. F. W. Wilson of the Natural History Department had so far fulfilled his respective duties, but I noticed him at his post, as courteous as ever to all seeking for information. I was pleased to meet many ardent fanciers in the cause, and having received their hearty greetings I at once made for the identical stage where "Class 1" was prominently posted up. I rather admire the style of elevating the numbers of the classes above the cages, for it may at once be seen how the classes run, and in a Show of large magnitude like the Palace one it saves unnecessary confusion and parading about.

The class for Clear Yellow Norwich contained no less than sixty-four birds, and I was pleased to find in it many fine specimens of the old stamp of Norwich bird giving evidence of good breed; in fact, this was the case in the whole of the first half-dozen classes, and had I my choice I should have selected birds out of those identical classes for breeding purposes rather than out of the high-coloured ones. I am inclined to think that the constitutions of birds reared upon a wholesome seed diet preferable to a spicy high stimulating food (cayenne for instance), which alone answers but one purpose—that for colour. A note in the schedule distinctly stated that the extra prize of £1 would be given to the winner of most points for birds not of high colour, but I could not help noticing that there were very many of very high colour indeed—in fact, some high enough to compete in classes 7 and 8. I could not help thinking that if exhibitors will be so careless in entering their birds they cannot expect to meet with success. Upon the first view I thought it a difficult task for anyone to attempt to pick out the prize-winners, but was glad to find that where the line had been drawn those not answering to the schedule were excluded. In class 1 Mr. R. Whiteacre of the Derby school exhibited a good specimen for the first place, being well followed up with one for second shown by Messrs. G. & J. Mackley of Norwich. Such was my opinion that there was very little difference betwixt them. Mr. Calvert's Yellow did credit to the good old city of York, and very justly had a second extra prize given to it; Messrs. Athersuch of Coventry stood next for a third, and Mr. Flexney of London gained an extra third. The prize birds were all in fine condition.

In the Clear Buff class Messrs. Athersuch here stood first with a very fine symmetrical-shaped bird, possessed of that beautiful mealy tint so much admired in the fancy. Messrs. Mackley were again forward, and it was almost a toss-up which of the two first in this class was best. Mr. Caplin's of Canterbury was a good third, and extra thirds were given to two capital Buffs exhibited by Messrs. Radmore & Galey. Sixty-five entries.

In classes 3 and 4, best Marked or Variegated or Buff Norwich, there was a stout contest for places. Some fine Marked birds were shown in both classes, and the winners stood in the following order:—J. Adams, Orme & Ashley, G. & J. Mackley, and Athersuch & Son, in class 3; and in class 4, G. & J. Mackley, Orme & Ashley, Athersuch, Caplin, and last, but not the least, an extra third exhibited by Mr. Tomes. In the two classes there were fifty-one birds entered.

In classes 5 and 6, for Ticked and Unevenly-marked birds, there were seventy-three entries, and considerable trouble must have been experienced in selecting those birds for prizes, mixed up as they were with so many birds bearing evidence of pepper feeding. Mr. Dennis's first-prize was a smart-made bird, in very close feather and good condition, and justly merited its place. The second-prize bird, belonging to the Rev. G. Herbert of Alcester, was a good pure-feathered specimen, somewhat larger than the first, but correctly placed. Mr. Flexney exhibited three birds in this class; but his 198 bird was placed third, the best of his lot to my thinking, although his No. 200 bird was catalogued at double the price. Messrs. Mackley were awarded an extra third. The Buff class was by far the best of the two Ticked classes, and for form and feather nothing could surpass those claiming the Judges' attention. Mr. Price of Pimlico very easily won first; the second (Adams) and third (Collinson) being more alike.

In the high-coloured Norwich classes (7 and 8) there were no less than fifty-seven Clear and Ticked birds, but only eighteen of best Marked or Variegated, the difficulty being much greater in bringing to the post good Marked birds compared to Clear and Ticked. In class 7 Mr. Adams, Coventry, ran-in an easy winner, he having obtained a first, second, and extra second with birds of extraordinary colour. Mr. Walter of Winchester was well up with a good third, and Messrs. Athersuch well earned an extra third. This and the following class very much attracted the attention of the visitors, many of whom seemed to doubt whether the colour had not been brought about with something more than cayenne pepper. In class 8, for the best Marked or Variegated, the contention mainly lay betwixt three firms of note. However, Messrs. Mackley won, beating the Coventry breeders, who stood thus—Adams second, Athersuch and Son third. Nos. 318 and 320 were here disqualified, the birds being somewhat short of feather.

Classes 9 and 10, Evenly-marked Crested Yellows and Buffs. I have seen better Yellows by odds, but the Buff-crested birds were a very fine lot. Mr. Woodward's superb hen won easily. She is a full-developed hen, being free in feather, fine in colour—evidently had a little spice—and carries a fine regularly-formed crest. Mr. Hovell's second-prize bird, Messrs. Mackley's extra second, Messrs. Waller's third, and Messrs. Moore & Wynne's extra third, were all first-class birds, and richly deserved their places. There were likewise several good birds in the same class with marks of distinction upon their cages.

In classes 11 and 12 there were thirty-eight birds; but as is generally the case in Crested classes, many of them were deficient in perfectness of crests, showing much of the baldness at the back part of the crests. Messrs. Mackley won both first prizes; Messrs. Craiger, Collinson, Pope, Hawman, Colman, and Woodward being the other prizetakers. In class 11 No. 383 was disqualified. In class 12, which was termed by the Judges a "magnificent class," I must especially notice 398 cage (Mackley), which contained a very fine Buff-crested bird. One of the best Crested birds out this season, although not quite so large in crest as Mr. Woodward's hen in class 10, but still very perfect in form, every feather being in its place from the centre of the crown, was the one No. 437 in class 13, which took the first honours; Mr. Clark being well in for second; Messrs. Martin and Griffin for extra second; and Mr. Hovell third, each very perfect.

The Belgian birds were confined to three classes—viz., Clear and Ticked Yellow, Clear and Ticked Buff, and Variegated (irrespective of colour). Mr. Tomlin exhibited a fair-standing Yellow in class 14; Mr. Doel following close up with a pair of birds (Nos. 462 and 461) which to judge of them must have done the Belgian performance proper for second and third places. Mr. Reid's bird was very well worthy of a third, which it received. There were eighteen Yellows, ten of the number being named. Class 15 (Buffs), Mr. Doel first, by odds the best Belgian positioned bird in the lot, carrying its head, neck, and shoulders well, with wings in their proper place, and tail well down. I should have liked it a little better had it been a little more

leggy, but as it was there were sufficient points about the bird to qualify it for the place it occupied. The Rev. H. F. Hamilton also exhibited a splendid specimen, which did duty in its cage exceedingly well. I like to see easy-standing birds in a show room, without so much fiddling with them against a wall. It is all very well to train Belgian birds when young to get them up to a certain stand or position, but to have to put every Belgian bird through a certain amount of drilling before deciding upon their respective merits would alone occupy one day in judging the Belgians alone. Mr. Doel followed the Rev. H. F. Hamilton's bird with a couple of good birds for third and extra third places. Both classes were well represented, many fine and deserving specimens receiving high commendations. Class 16 (Variegated Belgians).—Mr. Rutter of Sunderland was here more fortunate, taking first, second, and third prizes, and a very highly commended. Mr. Doel, Mr. Carver, and Mrs. Ada Dressing were the only other exhibitors.

The classes for London Fancy birds brought to the post a dozen of each kind, Mr. Waller of London showing five Jonques out of the twelve, and taking the first prize with a good-coloured bird (509); Mr. Brodrick being second, and Mr. Price third. In Mealies Mr. Waller was again to the front, his 522, which was decidedly the pick of his pair, being first, and 521 second Mr. Mann of Camberwell, London, showed three Mealy birds and obtained a third place.

Lizards were in good force in the four classes, two of which were for Foul-marked or Broken-feathered birds. In the whole of the classes Mr. Fairbrass was pretty successful. As in the Norwich and Cinnamon classes, I should not be surprised to hear of separate classes being established for high-coloured Lizards; not that I think Lizard birds are at all improved by high feeding, but judges differ somewhat in their views as to colour, some preferring the pure and unadulterated golden tint, and others the fiery red in Jonque specimens. No. 531 (Fairbrass), Golden, was brought to the post in very good order, not a spangle out of place, and fair in other respects. It would have been a doubtful case betwixt that and No. 534 (Cleminson & Ellerton) had not the latter bird's shoulder feathers appeared slightly awry. An equal second was won by Fairbrass, and a third by Bunting, both tolerably good birds, the latter somewhat behind in colour, but much better in shape. Class 20 (Silvers), the first-prize bird a very good one (Reid), in its proper place; the second and third being given to a couple of birds out of Mr. Fairbrass's four. Class 21 (Golden, Broken Caps) were thus fairly distributed: Fairbrass first, second, and extra third; Bunting extra second; and Cleminson & Ellerton extra third. Class 22 (Silver, Broken Caps), Fairbrass once more first with a fine bird, and also third; G. & J. Mackley popping in between the two a clever second.

The class for Yorkshire birds does not make much headway at the great Show, Yorkshire breeders seemingly not caring to send their birds so far southwards. Considering that Clean, Marked, or Variegated (irrespective of colour) are all included in one class, I look upon it as a miserable entry. However, Mr Belk of Dewsbury made it worth his while, having won a first, second, and extra third; Mr. Tomlin of Lincolnshire winning the third prize.

Cinnamon birds this year were spread over five classes, two extra classes having been made for high-coloured birds. This was certainly an improvement upon the previous Show, where high and low colour were mixed up together. Cinnamons of the present day, better known by our forefathers as Quakers, have much improved. They partake more after the shape of the Norwich birds, and to a certainty much of the Norwich blood has been imparted or they would not show the beautiful blooming tint of feather they do. Formerly they were of a dull, quiet, sickly appearance.

In class 24, for high-coloured Jonques, Mr. Adams carried out his season's performance by beating all comers and winning the three prizes. In the next class, high-coloured Buffs, Mr. Adams won first and second with the two birds he had entered; Messrs. Mackley being third, and Mr. Tarrond extra third. In classes 26 and 27 there was more competition amongst the more moderate-coloured Cinnamon birds. The winners in the first of the two classes were Caplin, Poole, and Bexson, and in class 27 Mr. Adams made another point for first place with a fine-feathered bird, followed up very close by Messrs. Moore and Wynne, who exhibited a capital second-prize bird. Mr. Bexson was again third. In the last two classes seventy-two birds were exhibited, which will give some idea of the competition. There were sixteen entries in the class for Marked or Variegated Cinnamons irrespective of colour, and the north-country exhibitors had the best of the race for the first and second places, Mr. Belk leading, followed by Mr. Wilkinson of Great Horton. Mr. Tomes was at home with a fair bird (702) out of his three, not the highest-price one either. By-the-by a bird in this class was priced at no less a sum than £1000, but I did not hear of a buyer—no, not even a bidder. The price of Canary seed could not possibly have enhanced the value of Canaries to such an extent. Not having any wish to purchase I passed on to the next class—Any other variety of Canary not previously specified. There was a fair variety in this class, consisting of Scottish Dons, Manchester Coppys, Cinnamon Crested, an original wild Canary, Green Canaries, a Cape Canary, a Jonque Green, Scotch Fancy, besides others, the prizetakers being Messrs. Mackley first with a splendid Coppy having a glorious crest; T. Curtis second with another good Coppy, and S. Tomes third. Here also I found a talking Canary, the price of which was set forth at £105—much cheaper than the one in the previous class. The bird was mute. Not a word would it utter, and I left it.—An Eye-witness.

RUFFED OR PINNATED GROUSE.

I have been reading "Wilson's American Ornithology." In the second volume from page 314 to 320 is a description of the Ruffed Grouse (Tetrao umbellus). It is well koown over all the United States as the Pheasant or Partridge of New England. Its natural habitats are high elevations covered with wood, and in such places they breed and roost, only leaving such recesses for the purpose of feeding; therefore to many of our noble Dukes—to wit, of Buccleuch, Argyll, Sutherland, and other Highland magnates it would be an elegant addition to the Black-cock, Grouse, and Ptarmigan. They pair in April and lay their eggs in May (nine to fifteen); fine plumage, is 18 inches long and 23 inches in extent; and as it prefers high, cold, mountainous, woody places, it would do well for Scotland. It struts with its tail up in the breeding season the same as our Blackcock does. The Pinnated Grouse are so wild that they would stand immigration. Messrs. Baily might procure some.—A. H. B.

[Pinnated Grouse have been imported in considerable numbers of late years. We have had many, but they are singular birds, and we doubt much if they would ever acclimatise in our islands. There is a belief here and in parts of the United States that at a certain time of the year the Ruffed Grouse is very unwholesome, if not poisonous, food. Attempts have been made two or three times to introduce the Hazel hen into Scotland, but it has not succeeded. We believe climate has something to do with it. We will communicate with the firm you mention.]

Poultry and the Season.—Snow, frost, and sleet follow one another in brisk succession, even in the south of England, and seldom has so unpropitious a season been known for early chicken-rearing. From all sides we hear complaints that eggs do not hatch, and that broody hens are not to be had for love or money. Still there is a bright side to every picture, and we must bear-up against a bad hatch with the hope that, though there be only one chicken, that it is quite possible it may be a cup-winner and sell for £20. While this bitter east wind lasts the few chickens we are lucky enough to have should be cooped in a dry shed, or at least be protected from the wind. March and April chickens generally make the finest birds in the end, and it will not do to condemn stock birds yet, especially if they are over one year old, and doubtless a little warm weather will work a change for the better.

CONSTRUCTION OF BREEDING CAGES AND EXTERMINATION OF RED MITE.

Starting with the advantage of some experience of the subject of breeding gained during my boyhood, for my father was an inveterate fancier, I did not fall into the mistaken views I have seen so frequently repeated by novices of building complicated constructions, or of purchasing the fanciful productions to be obtained at the shops devoted to the sale of presumed requisites. Cages of this description tend to perpetuating the red mite, the most alarming, vexatious, and most costly plague the breeder has to annoy him. There are few breeders who have not fought a battle or two of extermination with this persistent little parasite, and who have not at times given up almost in despair at their very wonderful regeneration.

Specifics out of number have been recommended, but I know of none thoroughly effective, and of one only that can claim any pretence to a cure—viz., cleanliness and isolation of every cage. As it can scarcely be expected that my argument will be sufficiently powerful to induce any of your readers who have made their arrangements for the coming season to start with a complete set of new cages, I will endeavour to explain to them how easily this pest may be kept at a minimum. If they have detached or even semi-detached cages, any precautions taken at this season, if effective, will repay both birds and breeder in comfort and happiness. Presuming that every earnest breeder has been or is busy cleaning, washing, varnishing, and whitening his cages, and that every crack, crevice, and corner has been thoroughly overhauled where it is possible for mites to have taken up their abode, let him obtain two pieces of fine-grained wood—mahogany by preference—3 inches square, and from half to three-eighths of an inch thick, and brad or glue them on to his cage at each bottom corner, with a marginal space of abont

1½ inch from the side and bottom, and into the centre of this screw a five-eighth-of-an-inch common wood screw, so that one-quarter of an inch projects beyond the square of wood. Next get for each nail upon which the cage has to be hung another piece of wood of the same size and kind as the before-described. Paint both the back of cage and nail pieces with two or three coats of best white oil paint until the face of it has a fine gloss. There must be no dry or sucking places left, more especially upon the pieces of wood. If there should be any space or cracks left between the wood and cage, fill them carefully with putty previous to the last coating of paint being laid on.

All the paint being dry and sound, hang the cage by driving a nail through the centre of the separate piece of wood into the wall. It is advisable that this nail have a good full head, so that there may be no danger of the cage falling. The piece of wood will form a shield against the wall, with the nail to carry the cage projecting from its centre. If there should be any danger of mites finding their way from the wall through the wood by the side of the nail, fill-up any vacancy that may exist with putty, and then drive in a three-quarter-of-an-inch clout nail, so that it projects about one-quarter of an inch just below the carrying nail, and thus preventing the cage from touching the shield. Hang the cage in its position, and you will see that no part of the body of the cage touches the wall.

Purchase two-pennyworth of crystal paper varnish, and mix it with an equal proportion of sweet, or, what is better, lard oil, and coat the two pieces of wood at the bottom corners of the cage and the nail shield liberally with this mixture, and you at once construct a bridge over which no mite can pass without paying the toll of death. This "catch-'em-alive-oh" mixture will retain its virtues for some six or eight weeks, after which time it will be necessary to remove it with a small quantity of turpentine, and replace it with a fresh supply of the mixture.

The advantages of this method of hanging breeding cages are, that in the event of any single cage becoming infested the mites are confined to that cage, unless it hangs directly over another, in which case it is more than probable that the latter also will be equally infested. The only attention requisite is to look occasionally to the insulating parts and see that they are not bridged over by a feather or particle of nesting material. Keep this free from dust and dirt, and you can periodically clean any cage and rehang it without the fear of its becoming contaminated by the migration of insects from neighbouring cages.—J. Packham.

OUR LETTER BOX.

Mandarin and Carolina Ducks (*Maude*).—They are easily reared, and commonly reared in England. They differ from most other Ducks in one particular; they perch—that is, if they are to do well they should have an old pollerd or other stem in the water, which they can use for that purpose. They will not make a nest and lay their eggs in it, but they must have a hut or hutch of some kind in which they can make their nest and lay. The accepted form is that of a very small dog kennel securely fastened to a pile driven into water, and standing fully 6 inches above the surface. To enable the birds to go in and out easily there should be a ladder composed of a narrow plank with cross pieces nailed on it, and forming an easy incline to the water. In this as in other cases it is well not to put all your eggs in one basket, half or more of the nest should always be put under a hen, and the rest left to the Duck.

Shell-less Eggs (*L. W. R.*).—Seeing the fowls at liberty are doing well in every particular, while those in confinement are not, we have to seek whether there be anything these latter lack besides their liberty. Their feeding is good. The shell-less eggs prove some of the functions of the body are not properly performed. We advise you to discontinue peppercorns, and to give them large sods of growing grass cut with plenty of earth. Give them whole barley or oats, the latter if they will eat them for their mid-day meal. We believe the grass and earth persevered in will prove a cure.

Fowls' Bowels Disordered (*Crève-Cœur*).—To prevent diarrhœa supervening give them in the morning a feed of bread soaked in ale, and do not let them out very early until milder weather arrives. The cold is the probable cause.

Poultry Trespassing (*W. L. P.*).—Give your neighbour notice in writing that unless he keeps his poultry at home you will sue him for the damage they do. If he afterwards does not keep them from trespassing sue him in the County Court.

Salted Corn (*A. B.*).—Corn soaked in salt water is not injurious either to pigs or poultry.

Chicken's Beak Diseased (*A. P.*).—The formation on the beak of the chicken you sent had the appearance of being caused by an accident. We cannot attribute it to anything else. We have bred many thousands of Brahmas, and have never met with any disease similar to that you describe. We believe if you will make strict examination you will discover the cause. We repeat we believe it to be accidental. The clean-legged chickens would seem to point at a faulty pedigree in the parents. It never happens to us.

Dorking Cockerels Voracious (*Farmer Giles*).—Give both the birds a large table-spoonful of castor oil, confine them for a day or two, and see that it operates effectually. Then feed them on soft food, ground oats or barley-meal, frequently, and very little at a time. No hard food. We believe this will bring them round.

Soft Eggs (*J. F. S.*).—Remove from your fourteen hens one of the three cocks. Supply your fowls with bricklayers' rubbish and a little chalk or lime. If you are feeding on meat, hemp, buckwheat, or canary, discontinue it for a time. To relieve an egg-bound hen take a wing feather and dip it in oil till it is saturated, then pass it down the egg passage till it meets the egg; move the feather about, and then oil it again. The hen will soon be relieved. Do not attempt to assist the egg; you may break it, and that will be fatal in its effects.

Fowls out of Condition (*I. O. N.*).—We should imagine they are very fat. The first thing you have to do is to discontinue the potatoes. They make fat and diseased livers. In this weather you must feed three times per day. Let it be done in this manner: Give at daybreak a meal of ground oats or barleymeal, mid-day some whole corn, and at evening feed as in the morning. Snow often throws fowls out of condition. What is the flooring of their roosting house? Give them enough to eat, but do not let any food lie about.

Fowls not Laying (*Jane*).—Your fowls are not well enough fed to lay. Discontinue the potatoes and bran. Give them slaked barley or oatmeal morning and evening, and a feed of Indian or other whole corn at mid-day. Feed moderately in quantity, and you will soon have no cause for complaint.

Redlock Seed (*C. B.*).—We believe it is true and good.

Goldfinch and Canary (*D. D. B., Redruth*).—Do not all at once discontinue the use of hempseed to your Goldfinch, or the bird might sulk and die. Goldfinches confined are curious birds to deal with; they can accommodate themselves to death very quickly, and it might so happen with your Finch. You may increase the proportion of canary seed to the Goldfinch, and likewise supply rape and linseed. Hempseed mixed with the other kinds will not harm your Canary hen, particularly now and during breeding time. The same food will suffice for both birds when together. You may also supply them with egg and biscuit mixed, and mawseed and young dandelion roots, which will forward them for pairing when the time comes.

Books (*A Straw Hive*).—The second edition of Mr. Pettigrew's book on bees is rapidly passing through the press, and will be published in a few days.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.
Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. Feb. and March.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 24	29.345	39.2	39.0	N.N.E.	35 6	38.2	25.1	48.1	23 4	0.229
Th. 25	29.454	38.6	39 6	W.	35.1	41.5	30.0	69.4	30.8	0.015
Fri. 26	29 549	38.0	37.2	E.S.E.	35.0	45.7	33.0	74.9	28.7	—
Sat. 27	29.635	34.5	32.0	S.E.	36 3	38 7	32.8	40.0	32.2	—
Sun. 28	29.785	31.5	30.8	N.	35.3	39.2	30.8	36 8	30.8	0.010
Mo. 1	29.756	31.1	30.8	N.E.	35.3	33.8	29.9	41.7	29.5	0.080
Tu. 2	29.807	31.7	31.2	N.E.	35.0	33.0	30.2	36.4	30.5	—
Means	29.619	32 8	32.2		35 4	37.6	30.9	49.6	29.3	0.284

REMARKS.

24th.—Snowing heavily from 10 A.M. till noon, then fair, and thawing soon after 6 P.M.

25th.—Fair in the night, but snow at 7 A.M., occasional gleams of sun, but on the whole a very wintry day, thawing in the evening.

26th.—Dull morning, snow still on the ground, very bright for an hour or two about noon, but dull after 3 P.M.; fair evening.

27th.—Fair, but rather dull all day, and very cold.

28th.—Dull though fair; a few flakes of snow about 1 P.M. The day might be said to be sunless, the difference between the temperature in shade and that in the air in vacuo being only 3.6—*i.e.*, 33.2 and 36.8.

March 1st.—Very dark morning, sleet and fine snow falling from 9 to 11 A.M., and at intervals all day.

2nd.—Snow in the night and early morning. Dull, cold, wintry day.

Cold uncomfortable week, temperature never very low, but on the other hand only twice rising to 40°.—G. J. Symons.

COVENT GARDEN MARKET.—March 3.

This wintry weather of the past week has been telling upon us by keeping the growers away from market, and some of the rough goods have advanced in consequence, but not to a great extent. Hothouse Grapes are now limited to few consignments, and are chiefly Lady Downe's. Potatoes are freely supplied, but very few samples are free from blight. Prices remain stationary.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ..... ½ sieve	1	6	to 3	0	Oranges ..... ℔ 100	8	0	to 12	0
Chestnuts ..... bushel	10	0	20	0	Pears, kitchen ..... doz.	2	0	3	0
Filberts ..... lb.	1	0	1	6	dessert ..... doz.	3	0	8	0
Cobs ..... lb.	1	6	2	0	Pine Apples ..... lb.	2	0	6	0
Grapes, hothouse ..... lb.	3	0	12	0	Plums ..... ½ sieve	0	0	0	0
Lemons ..... ℔ 100	8	0	12	0	Walnuts ..... ℔ 100	1	0	1	6
Melons ..... each	0	0	0	0	ditto ..... bushel	3	0	12	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes ..... doz.	3	0	to 6	0	Leeks	0	4	to 0	0
Asparagus ..... ℔ 100	6	0	10	0	Lettuce ..... doz.	1	0	2	0
French ..... per bundle	20	0	30	0	Mushrooms ..... pottle	0	3	1	0
Beans, Kidney ..... per 100	2	0	3	0	Mustard & Cress .. punnet	0	2	0	0
Broad ..... bushel	0	0	0	0	Onions ..... bushel	3	0	6	0
Beet, Red ..... doz	1	0	3	0	pickling ..... quart	0	6	0	0
Broccoli ..... bundle	0	2	1	3	Parsley per doz. bunches	6	0	8	0
Brussels Sprouts ½ sieve	3	0	4	0	Parsnips ..... doz.	0	3	1	0
Cabbage ..... doz.	2	0	3	0	Peas ..... quart	0	0	0	0
Carrots ..... bunch	0	6	0	8	Potatoes ..... bushel	2	6	5	0
Capsicums ..... ℔ 100	0	0	0	0	Kidney ..... do.	3	0	6	0
Cauliflower ..... doz.	4	0	8	0	Radishes .. doz. bunches	1	0	1	0
Celery ..... bundle	1	6	2	0	Rhubarb ..... bundle	1	0	1	6
Coleworts .. doz. bunches	6	0	8	0	Salsafy ..... bundle	1	3	0	0
Cucumbers ..... each	2	0	3	0	Scorzonera ..... bundle	1	0	0	0
pickling ..... doz.	0	0	0	0	Sea-kale ..... basket	2	0	3	6
Endive ..... doz.	2	0	0	0	Shallots ..... lb.	0	3	0	6
Fennel ..... bunch	0	3	0	0	Spinach ..... bushel	0	0	4	0
Garlic ..... lb.	0	3	0	0	Tomatoes ..... doz.	0	0	0	0
Herbs ..... bunch	0	3	0	0	Turnips ..... bunch	0	3	0	0
Horseradish ..... bundle	0	0	4	0	Vegetable Marrows .. doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	MARCH 11—17, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. h.	m.	Sun Sets. h.	m.	Moon Rises. h.	m.	Moon Sets. h.	m.	Moon's Age. Days.	Clock before Sun. h.	m.	Day of Year.
11	Th	Royal Society at 8.30 P.M.	49.1	32.2	40.7	25 af	6	55 af	5	43 af	7	20	11	4	10	10	70
12	F	Literary and Artistic Society at 7 P.M.	50.4	32.2	41.3	23	6	57	5	4	8	morn.		5	9	54	71
13	S	Royal Botanic at 3.45.	50.4	34.0	42.2	21	6	59	5	33	8	51	0	6	9	38	72
14	Sun	5 Sunday in Lent. Passion Sunday.	50.8	34.4	42.6	18	6	0	6	11	9	16	2	☽	9	21	73
15	M	Entomological Society at 7 P.M.	50.6	33.6	42.1	16	6	2	6	8	10	26	3	8	9	4	74
16	Tu	Manchester Botanical and Horticultural Society.	51.0	34.0	42.5	14	6	4	6	19	11	21	4	9	8	47	75
17	W	Royal Horticultural Society, Fruit and Floral Committees at 11 A.M.	52.0	32.5	42.3	12	6	5	6	after.		58	4	10	8	29	76

From observations taken near London during forty-three years, the average day temperature of the week is 50.6°; and its night temperature 33.4°.

GUMMING; ITS CAUSE AND PREVENTION.

WOULD that I dare write cure instead of prevention. I am obliged to acknowledge, however, at the outset that when a tree which is grown out of doors has once got a habit of gumming, I know of no permanent cure for it. This disease (?) often commences at a very early stage of the tree's existence, and it is worse than useless at any time to plant a young tree with the least tendency to gum. In the case of trees which are come to the fruiting stage it is different; they may be planted temporarily to produce fruit for a season or two while young healthy trees are being prepared to supply their places.

What is the cause of gumming? The best general answer I can give is—severe checks to the sap and sap vessels. These checks are brought about in many ways, such as by extremes of temperature, the evils of which are multiplied when the trees come in contact with metal or other quick-conducting substances; by cutting back gross growth, which has been produced by an excess of manure; by wounds from nails, shreds, ties, sharp bends, and sometimes even a touch with the hammer; by pruning after growth has commenced—*i.e.*, any time after Christmas; by disbudding before the bark has set. When the growths are 1 or 2 inches in length it will be found that it is then difficult to remove one of these growths without taking a portion of the bark with it; it is even impossible for the most skilful manipulator at such a time to disbud a fair-sized tree without having one or two mishaps in this way. At a very little later period the bud will part from the bark very easily indeed without any damage. Gumming may also be caused by insects, and by a very low temperatnre checking the first growths in spring, so that the leaf action is not sufficient for the roots. All trees on the Plum stock commence action first at the root, and at a certain stage they require corresponding leaf action; if this is not forthcoming something must go wrong. May not gumming be also caused by leaving too many flowers to set and too many fruit to stone? Remember, if Peach trees were grown in their natural bush form there would not in proportion be a quarter of the fruiting wood on them there is on our trained trees. As far as I am able to form an idea they would be of similar habit to the Kentish or Morello Cherry unpruned and untrained, with the bearing shoots at the extremities of the branches only. Finally, may not syringing with cold water on a hot summer's day have something to do with gumming? Think of the temperature of a south wall on such a day, perhaps it is 120°. If water were used of the same temperature as the wall it would cool it considerably by evaporation. What must be the effect when the water is only 65° or 70°?

Having pointed out some of the ways by which the sap and sap vessels receive severe checks and thereby produce gumming, I will now attempt to explain how these checks may often be prevented.

1. As to Extremes of Temperature.—Now I do not believe the Peach tree, even at midwinter when trained to a wall, is capable of bearing with impunity 25° or 30° of frost followed by bright sunshine while the branches are still covered with ice. If, then, they have to endure such a severe frost, some means ought to be found to screen them from the sun for a time should it make its appearance while they are still frozen. As a rule, plants standing in an open exposed situation, especially if it is elevated, do not suffer so much from very severe frosts as those do which are in what is called a sheltered position, and of course the sun has more effect on the plants so sheltered, so that the extremes are greater. Tender trees, such as Peaches, where they are liable to great fluctuations of temperature, ought certainly not to come in contact with metal or other rapid conductors. Indoors, where the plants are never frozen, a wire trellis is the best; galvanised wire I prefer, but, as pointed out by Mr. Abbey, it ought to have an even surface, or galvanism may get the credit for injury done by a very simple mechanical means.

2. Cutting-back Gross Growth produced by an Excess of Manure.—A soil should be used that is sufficiently rich of itself to produce moderate growth without adding any large quantity of manure. Gross growth is not required, it never ripens and it never produces fruit; if you cut it back you will either have gumming or shoots of unequal dimensions produced from it, and perhaps both. My advice is, rather have the soil too poor than too rich; have it mechanically right, and supply a stimulant if required in the shape of washings from the manure heap any time in winter or spring, but not later than spring; also have the border thoroughly drained and rather elevated with a view to the ripening of the roots.

3. Late Pruning.—I am sorry to see this practice is still recommended, but happily not in "our Journal." The roots of Plum stocks commence growing soon after Christmas, sometimes before; a perceptible swelling of the buds very soon follows; to use the knife then is most cruel—barbarous. If my trees were left so long unpruned I should then certainly leave them till July, keeping the young growths pinched back where they are not wanted, and finally cutting the surplus shoots entirely away when the trees are in full growth. This is what I actually do in the case of late-planted trees—*i.e.*, trees planted after November. All pruning of established trees should be finished as soon as possible after the fruit is gathered. With well-managed trees there is not much to do even then; it is only the bearing shoots of the current year to be cut out. Some people say late pruning of Peach trees causes late flowering. It is perfectly untrue.

4. Disbudding too Early.—Disbudding ought to be done very carefully and not too severely. It is better to pinch-back the points of some of the growths at first rather than disbud too much at once, and allow the principal shoots to get into a good healthy growth so as to be able to utilise the extra sap when the final disbudding takes place.

5. Insects and Low Temperature checking the First

Growths.—The first we have complete command over; there is no reason why an insect or an insect's egg should be left alive on a Peach wall in winter. If they are destroyed there is a chance of the young growths having a fair start before they are again troubled with them. Temperature can only be kept up by good covering; the best next to glass, even preferable to uncovered and unheated glass, is frigi domo and a broad coping. The frigi domo is expensive at first, but it lasts a good many years, and in the end I am inclined to think is cheaper than any kind of netting and ten times more effectual. —William Taylor.

ROYAL HORTICULTURAL SOCIETY.

The Annual Meeting of the Royal Horticultural Society, adjourned from the 9th of February, was held last Tuesday in the Council-room, South Kensington, Viscount Bury, the President, in the chair. Amongst the members of Council present were Sir Coutts Lindsay, Bart., Mr. Webb, Mr. Little, Mr. Burnley Hume, Mr. Kellock, Mr. Benamy Dobree, the Hon. and Rev. J. T. Boscawen, Mr. Warner, Mr. W. A. Lindsay, Secretary. Amongst the general body of the Fellows were Lord Lawrence, Sir Alfred Slade, Bart. (recently resigned from the Council), the Hon. Mr. Chetwynd (who has also resigned his seat at the Council), Mr. Godson, Dr. Hogg, General Scott, Dr. Masters, Dr. Denny, Mr. Fortune, Mr. Houghton, Mr. MacKenzie, Mr. Moore, Mr. Shirley Hibberd, Mr. Bateman, Mr. Paul, Mr. Beale, Mr. Fraser, Mr. Williams, Mr. Turner, Mr. Standish, Mr. Wells, Mr. Andrew Murray, Mr. G. F. Wilson, Mr. Liggins, Mr. E. J. Beale, Mr. Fulton, Mr. Bull, Mr. Smee, Mr. J. R. Pearson, Mr. Noble, Mr. Veitch, Rev. C. P. Peach, Mr. Pinches, Mr. Edgar Bowring, Mr. Walford, Mr. Guedella, &c.

The Secretary (Mr. W. A. Lindsay) read the advertisement calling the meeting.

The following is the amended Report of the Council submitted to the meeting:—

REPORT OF THE COUNCIL TO THE ADJOURNED ANNUAL GENERAL MEETING.

(1.) The Council are happy to inform the Fellows of the Royal Horticultural Society that, since issuing their Report to the Society, the position of affairs has materially changed.

The speech made on behalf of Her Majesty's Commissioners at the meeting of 9th of February was so friendly in character, and conveyed assurances so satisfactory to the Society, that the Council feel it incumbent upon them to omit from their Report any passages which might present even the appearance of disunion between themselves and the Royal Commissioners.

(2.) The Council have great pleasure in again commenting upon the magnificent displays of fruits, flowers, foliage, and other plants at the Society's exhibitions during the year 1874, and especially at the concluding exhibition of the season, when the collections of fruit and Chrysanthemums surpassed almost all similar collections of former years.

(3.) The amendments introduced into the schedule, together with the reduction in the number of the exhibitions, have all contributed to this gratifying result.

(4.) The more purely scientific work of the Society has been ably performed, and the meetings of the Fruit and Floral Committees have been well attended.

To encourage still further the discussion of horticultural subjects, the Council have established, as an experiment, evening meetings, which those Fellows who are interested in horticulture are specially invited to attend. The experiments made at Chiswick form, as usual, the subject of a supplementary report.

(5.) In the course of last summer the Council received a very advantageous offer from Messrs. Prince, for the privilege of constructing a skating rink in the Society's Gardens.

(6.) Messrs. Prince proposed to pay by way of rent a sum equal on an average to £1100 a-year, to erect the rink and necessary approaches entirely at their own expense, and to conform to such conditions and regulations as might be approved by the Council. The Council considered it their duty to accept this offer, believing that it would be agreeable both to Her Majesty's Commissioners and to the Society. The moneys accruing from this source would assist the Society to meet punctually their engagements, not only with their landlords, but with their debenture-holders and other creditors, and by relieving the Society from the pressure of pecuniary embarrassment would enable them to devote more time, attention, and funds to the improvement of horticulture in all its branches.

The rink might thus be said to come within the terms of our lease, by contributing materially, though indirectly, to the interests of horticulture.

(7.) Her Majesty's Commissioners, however, did not consider it expedient to become parties to this arrangement, and as under the Charter of the Society Her Majesty's Commissioners have the power to prohibit any proceeding of the Society which is not directly of a horticultural nature, and the Society have, moreover, no power to assign, underlet, or part with the premises demised to them without the consent in writing of Her Majesty's Commissioners first obtained, the Council felt it right to proceed no further with the arrangement with Messrs. Prince, although no direct prohibition had been sent to them by Her Majesty's Commissioners.

The Council beg to express a hope, based upon friendly communications recently made to them by Her Majesty's Commissioners, that all difficulties in the way of a satisfactory understanding between Her Majesty's Commissioners and the Society may soon be removed.

(8.) The Council have now to call the earnest attention of the Fellows to the financial position of the Society.

During the past year it has been impossible to make any great impression upon the amount of the debts due by the Society referred to in the last report. The Council are, however, happy to inform the Fellows that they have succeeded in compromising for a cash payment of £600 a debt due to the executors of Sir Trayton Drake of £1000 (with interest since 1864), which was advanced to the Society prior to 1860; and which, until the accession to office of the present Council, had been ignored in the published accounts of the Society, and they have also settled a claim of Mr. Cooper's amounting to £105 for work done in the year 1862.

It has become evident to the Council, and, indeed, must be apparent to the Fellows, that the ordinary revenue of the Society cannot support its present expenditure; and to prevent any increase of the Society's liabilities during the year 1875 the Council have been compelled to make several, in their opinion, most undesirable reductions in the expenditure.

The attention of the Fellows is specially called to the fact that unless the rent of £2400 is paid to Her Majesty's Commissioners next year, the lease of the South Kensington Gardens may be forfeited, and to prevent this contingency an increased revenue must be obtained.

This increased revenue the Council suggest may be obtained by concerted action on the part of the Fellows, whether resident in the neighbourhood or not, and by increasing the number of Fellows. The Council are prepared to invite a general meeting of the Fellows to discuss this question in detail. A definite scheme will then be submitted for consideration.

In conclusion, the Council beg to express their unanimous opinion that it is the bounden duty of the Society to do its utmost to retain the Gardens in its possession as "a suitable area in which they may exhibit and display the progress of horticulture," and also to enable them to fulfil the Society's obligations to their life Fellows and their debenture-holders; and in such a course the Council feel sure they will have the hearty and cordial co-operation of every Fellow of the Society.

The Chairman said—It now devolves upon me, gentlemen, to place before you the Report of the Council. You will remember the circumstances under which their former Report was withdrawn. The Council and the Society generally had been long desirous of coming into amicable friendly relations with Her Majesty's Commissioners. A gleam of light dawned upon us not very long ago, and at that time the Report of the Council had been issued to the Fellows. We found that certain passages in that Report stood between us and the consummation of our wishes, and that the Commissioners felt somewhat annoyed at the terms in which they were mentioned in the Report. We felt that as your representatives nothing ought to stand between us and the fulfilment of your wishes and of our wish to enter into relations of the most perfect amity with Her Majesty's Commissioners. We had not intended any disrespect to Her Majesty's Commissioners, but the Council had intended in their Report to state facts they themselves were in possession of [hear, hear]. They felt, however, that it was absolutely essential that even the appearance of disunion should be avoided by them, and they consented most cheerfully to take back the Report which had been placed before you, and the result has been an amended Report, which is now lying on the table for your consideration. We hope that the circumstances which have since arisen are such as fully justify us in the course which we have adopted [hear, hear]. We have several satisfactory announcements to make to the meeting. One is the complete restoration of good offices and good understanding between Her Majesty's Commissioners and the Royal Horticultural Society [hear, hear, and "no"]. That I will proceed to place beyond a doubt before I go further. We have received from Her Majesty's Commissioners a dispatch dated yesterday, the 8th of March. It is as follows:—"I am directed by Her Majesty's Commissioners for the Exhibition of 1851 to inform you that since the Annual General Meeting of the Royal Horticultural Society, held on the 9th of February last, they have taken the opinion of counsel on the effect which the proceedings of that meeting of the 9th of February had on the legal position of the present governing body of the Society; and that they have been advised there has been a sufficient acceptance of the resignations of the members of Council who resigned in April 1873, and a sufficient confirmation of the election of the existing members of Council to render the status

of the Council free from objection [loud cheers]. Under these circumstances I am to inform you that the Commissioners will have pleasure in resuming official relations with the Council of the Society" [applause]. I doubt not, gentlemen, that dispatch is satisfactory to you to hear as it has been to the Council to receive [hear, hear]. We are now in the position we have long desired to be—in immediate relations with Her Majesty's Commissioners, which has, as we believe, smoothed the way to an amicable and equitable discussion of the bases on which the affairs of this Society are to be administered; and we think that with these amicable relations existing between us and the Commissioners nothing need stand in the future between us and financial success, and the success of the Society in the aspect of a horticultural body [cheers]. Passing away for a moment from that, I touch for one moment on the position of the Society with regard to horticulture; and perhaps you will allow me to say two preliminary words with regard to my own position. I know it has been thought, as appears from some of our horticultural journals, that I am one of those outside Fellows—those "local" Fellows as I believe they are called—who are not altogether acceptable to horticulturists pure and simple. Well, gentlemen, I beg to say for myself I am President of the Royal Horticultural Society, and as such I am neither a "local" Fellow nor a "horticultural" Fellow [laughter]. Since I have had the honour of occupying this chair I have never, in all the meetings I have attended, done anything which would further in a greater degree the interests or the objects of "local" Fellows or the local objects of horticulture. I felt it was my duty as chief of your Society to maintain an entirely neutral position [hear, hear], and I trust all those who know me, and I trust all who sit around me, will support me when I say such is the position which I have always assumed [cheers]. Therefore, gentlemen, I request you to take an honest expression of my opinion—as independent an opinion as it is possible for me to form. I should oppose any action on the part of "local" Fellows I thought injurious to the well-being of the Society; and I would equally, if I found it necessary, oppose any action of the section called "horticultural" if I thought it was injurious [hear]; and I consider in so doing I should be loyal to both, because I should be loyal to the Society to which both belong [applause]. Under these circumstances I have been exceedingly sorry to learn it was the intention of the purely horticultural section of the Society to oppose the adoption of our Report this day. I trust the opposition which has thus been announced is only the opposition of a very few members of the Society [hear, hear]. You must remember that on your Council at the present moment there is an actual majority of what are called "horticultural" Fellows. I am sorry that distinction between "horticultural" and "local" Fellows has ever arisen [hear, hear]. I believe it is injurious to the best interests of the Society, and that unless you can get rid of it your Society will go altogether to the wall [hear, hear]. I can assure you at the Council Board upstairs that division is not felt, and that the interests of the Society have been invariably brought to the front, and that our duties have not been regulated by a broad line dividing the "horticultural" and "local" Fellows, but by the independent opinion of members as to the best interests of the Society. When such is the case with the Council you have called upon to represent you, such should assuredly be the case outside these walls. And I think if the Society will reflect upon the position in which we now are, they will find that all "horticultural" Fellows and "local" Fellows —if you still retain the name—are equally willing to support the Council on the present occasion. It is true we have been in great financial embarrassment. We are still in great financial embarrassment. Our best escape from that is not by throwing-up the game in despair [cries of hear, hear], but by putting our shoulders to the wheel and working together [cheers]. We see now, being in amity with Her Majesty's Commissioners, an opportunity of landing you in smooth water; but this is scarcely the time to propose to surrender the gardens we have held under agreement into the hands of Her Majesty's Commissioners. I think we may truly say that is a suggestion un-English and, indeed, cowardly [hear, hear], and I will further say that from all personal communications with Her Majesty's Commissioners I am satisfied they are not desirous of possessing these gardens. I go farther—they would feel a certain embarrassment in the possession of these gardens from which we as partners with them in the gardens and well-wishers of the Society should relieve them. Therefore I think if any "horticultural" Fellow proposes to throw upon our hands this Report, which has been carefully taken and remodelled to meet the objections expressed at the Annual General Meeting of the Society, and if they do not adopt this Report, I think they will commit a mistake in the interests of the Society. It has been said the present Council have not sufficiently devoted themselves to the interests of horticulture pure and simple. One of the objections made is that the schedule proposed for 1875 has not been adhered to, and that the four shows advertised in the schedule have been withdrawn by the Society. When the matter was brought before the Council they went into it on its merits. They found that the funds did not admit of paying the large sum which was set apart for prizes. When you have no money you can spend no money. We were therefore bound to make a reduction in that respect, and the mode of reduction was the question. We proposed to do it by withdrawing four of the Shows advertised, and we were told by members of our Council who well represent the interests of horticulture that that would not be agreeable to horticultural interests generally, and we therefore appointed a committee and gave them this instruction —"It is absolutely necessary that if these prizes be given we should save a certain sum of money; if you can retain all the shows advertised in the original schedule and still show the saving we will reconsider the schedule." We appointed to that committee gentlemen who had an entire acquaintance with and the respect of the horticultural world. Their report has been now presented to us, and I have the satisfaction to tell you that all the shows advertised to be held in 1875 will be held [hear, hear], but that of course, as we have not money to pay all the prizes to their full extent, we must diminish the amount of the prizes. We have taken the opinion of many of the smaller exhibitors who would have been shut out from the exhibition by the non-holding of these four shows; and also the opinion of the larger exhibitors, who are very much concerned in the matter. The latter have very handsomely said they would exhibit whatever the amount of prizes might be, and that is because, as I hope and firmly believe, our horticultural exhibitions are not intended simply for the money value of the prizes they bring, but in the distinction gained by those who win prizes [hear, hear]. I hope that will be taken as an evidence of the strong desire on the part of the Council to meet the views of the horticultural members of the Society as far as it is consistent with their funds to do. I do not think, gentlemen, there are many more subjects on which I need detain you. There is one point which at one time I thought might have produced some discussion at this meeting, and that is that since the commencement of this meeting, of which this is an adjournment, two of the members of our Council have found it necessary to withdraw from our Council Board. The gentlemen so resigning were members who have always taken a most active part in the affairs of our Society. They have brought to bear upon the management of the Society the exceedingly valuable qualities of industry and of ability, and the Council regret their absence; and the Society, I am sure, will regret their absence extremely, because they are very strong props of the Society [hear, hear]. It was thought at one time that their vacancies would come before this meeting to be filled-up, and it was well, therefore, for the Council to be clearly aware of what their legal position was on that matter before they met the Fellows here to-day. The Council have obtained the joint opinion of Mr. Cole, Q.C., and of Mr. Lindley, Q.C., both being names which will command the assent of all present here, because we all know their high legal standing and their deeply solid acquaintance with the affairs of the Society. We are informed that under the bye-law, the validity of which is not impugned, vacancies caused by the resignations of Sir Alfred Slade and Mr. Chetwynd must be filled-up by the Council, and not by the Fellows generally. They were elected at the Annual General Meeting, and so far as that election is concerned the business of that meeting is at an end. The resignations, therefore, of these two gentlemen will come in the ordinary form before the Council, and will not be submitted to the Fellows of the Society. In support of that, as I believe there is some difference of opinion among members of the Society, I will read to you counsels' opinion. [Several members, "Taken as read."] Well, then, gentlemen, you may take it on my word that question shall not trouble us or come before us at all. I think, gentlemen, I have now touched upon the principal topics which it is my duty to notice. I am glad to say that our relations with Her Majesty's Commissioners are now of a perfectly amicable character, and that if any body can carry throughout to its desired consummation the affairs of the Society, the Council which have now the honour of addressing you have as good a chance as anybody else [cheers]. There is one point which, perhaps, it might be advisable for me for a moment to advert to, because upon it I have heard that some Fellows found an objection to our Report —and that is the last two clauses of the Report which say, "This increased revenue the Council suggest may be obtained by concerted action on the part of the Fellows whether resident in the neighbourhood or not, and by increasing the number of Fellows. The Council are prepared to invite a general meeting of Fellows to discuss this question in detail. A definite scheme will then be submitted for consideration." Now, gentlemen, I have heard it said that the wish of some of the Fellows is to send back this Report to us—in other words, to adjourn the meeting until we can tell them what that proposal is. Now I say distinctly that that clause was worded in the way it was deliberately and advisedly. The first object we had before us at the meeting of the 9th of February, of which this is the adjournment—and the only object in point of fact we had before us—was to obtain such recognition from Her Majesty's Com-

misioners as would enable us to enter into friendly and equable relations with them. We heard from them from time to time that when we made ourselves a legal Council they would (and I enter not now into the question whether we were a legal Council or not) be prepared to treat with us on an equal basis. I have now read to you the dispatch of the Commissioners, that the action taken on the 9th of February has made us a legal Council, and that they are prepared to deal with us upon an equal basis. The one object, therefore, which we had to discuss at the last meeting of the Society has been fulfilled as far as the Council is concerned. We felt, gentlemen, that we were bound not to divert the attention of the Fellows from that one main object which will be attained as soon as the Report is adopted by trailing a red herring across your path. Of course, in human affairs you cannot find a large body of men to be of one mind without discussion. If we had submitted any proposal to you in the Report, the chances are your attention would be diverted to the details of that proposal—that you would have discussion on them instead of pursuing the main object for which we have met. When you have passed this Report, gentlemen, you will be in smooth water as far as the Commissioners are concerned. Without doing that you cannot be in smooth water, and you will be going headlong to ruin [hear, hear]. Pass this Report which commits you to nothing. The Report was purposely drawn so that you could vote for the main object we have in view—viz., to land this Society, as regards the Royal Commissioners, in a position of legality which it has not heretofore assumed. I hope, gentlemen, I have made this point clear to you, and I conclude by placing before you for your consideration the Report upon the table [cheers].

Dr. Masters.—Will you kindly say by whom the letter of the Commissioners is signed?

The Chairman.—By "Henry Scott, Major-General." Is there any objection in the body of the hall to the adoption of the Report?

Mr. Dolman remarked that Her Majesty's Commissioners are not disinclined to come to terms or to a satisfactory understanding. He should like to know in what particular way was that about to be arrived at.

The Chairman.—It would be premature for us to express any opinion on that point. There are members of the Royal Commission here present who can speak on the point if it is thought advisable to do so. As we shall not meet the Commissioners until the Report is adopted, I am not in a position to answer the question.

Mr. Andrew Murray.—Why should you not meet the Commissioners until the Report is adopted?

The Chairman.—Because this meeting is incomplete until the adoption of the Report. We are not now in the position of absolute legality which we shall be in when the Report is adopted.

Mr. Murray.—I thought the Report was received.

Mr. Chairman.—The meeting is not yet over, and the Report has not been yet adopted.

Mr. Dolman.—What about the skating rink? Has it been assented to by the Commissioners?

The Chairman.—We have only had a private correspondence on the subject.

A Fellow.—We ought to have some definite assurance whether the proposition as to the skating rink is to be carried out or not [hear, hear].

The Chairman.—The Council has no definite assurance to give you on that point.

Mr. Guedella said he had no wish to throw the apple of discord into the meeting, but wished to express his opinion that there had been an extraordinary change of opinion amongst all parties to these transactions. In the first place, the opinion of the Commissioners appeared to have changed very much after they got the opinion of counsel, which they could have obtained long ago [a laugh]. Then, what change was it that had come over the gentlemen sitting at the Board? With the exception of two gentlemen who had manfully stuck to principles and sent in their resignations the Board had adopted a peaceable line of action, and he should like to know some of the circumstances which induced these gentlemen to come down at the eleventh hour with a change of policy. Then came the question whether the members of the Council were the gentlemen who could conclude the best arrangement with Her Majesty's Commissioners—whether they were the proper people to carry out the arrangements for the benefit of the Society [hear, hear]. He certainly thought the present Council should have exercised more spirit since they came into office. There was one of the finest conservatories in the world on their premises, and if they had a ball in it they could have made £2500 by it ["no" and laughter]. He thought the skating rink was one of the most advantageous speculations that could be made. His object was to rouse the Council from their state of inaction. He regretted the resignations of the two members of Council, and should like to know what were the reasons for them—whether it was a firm adherence to policy and principle that prevented them remaining in the Council?

The Rev. C. P. Peach said he had been asked to propose the following resolution or amendment:—"That the Chairman be requested further to adjourn the Annual General Meeting, so that the Council may be able to present to that adjourned meeting, with their Report, any scheme they may be able to enter into with Her Majesty's Commissioners." The reverend gentleman said it was quite necessary the meeting should be adjourned in order to see what agreement could be entered into between the Council and Her Majesty's Commissioners [cries of "no, no."]. At the last meeting the Chairman said the legality of the Council was granted, and immediately afterwards he tried to force the Fellows to accept the Report by saying that unless they did so the legality of the Council would not be obtained. He could not see how the legality of the Council could be recognised by Her Majesty's Commissioners when an attempt was made to force the Fellows to accept the Report. There was another question which had not been brought before them, and that was the question of the provincial shows. Nothing in the Report showed there was any attempt being made to get up provincial shows in the interest of horticulture [cries of "question"]. Their President said he was neither a local nor a horticultural Fellow [no, no]. Surely this was a horticultural Society, and surely horticulture ought to be considered first by the Society in all its bearings. He appealed to all horticulturists present whether it would not be of advantage to adjourn the meeting [cries of "yes" and "no"] in order to come to some definite arrangement and see where they stood. At present they were, financially speaking, in a condition bordering on bankruptcy. He did not want to reject the Report in any way, but he wished the meeting to be adjourned to see what arrangement could be come to.

Mr. Liggins remarked that the Report had not been seconded.

The Chairman.—No, and for this reason: Our bye-laws say that after the Report has been read the consideration of other business may be proceeded with. A legal question arises whether it means the proposal of the Report for adoption. Technically it does not. Practically we hold to our Report, and any amendment carried against it we should consider as a vote of want of confidence.

Mr. Liggins.—Precisely so.

The Chairman.—We are bound by our bye-laws, so that I move that the Report be considered.

Mr. Quilter rose to second the amendment, which he considered a most reasonable one. When he saw the onslaught that had been made two years ago on the then existing Council—so much so as to cause them to resign [a voice, "They were turned out."]. Well, he believed they would have helped the Society out of its difficulties. After having refused all reasonable propositions from Her Majesty's Commissioners the Council had done nothing that day but consider everything that was adverse to horticulture instead of what would encourage it [cries of "no" and "yes."]. The statement of the Council would prove it. First of all they gave up the provincial shows which produced a good annual income, and next they curtailed the privileges of the members [hear, hear]. Next year the shows were curtailed, and the result was that the Society's funds were far worse now than they were then—indeed the funds were something like £1500 worse now than they were two years ago. Under these circumstances before they passed the Report they ought to have something like a scheme before them to show them the way out of the difficulties in which they were placed. The Chairman told them that if they passed the Report they would be landed in smooth water, but he could not speak with any certainty, and so they might be in worse water than they ever were before. The exhibitors had not been paid prizes which ought to have been paid out of last year's revenue. He supposed the Council had been waiting to receive as much of the Fellows' money as they could [no]. At the last meeting they heard in that room that the Commissioners were willing to meet the Fellows on fair terms, and certainly the Fellows had a right to know what these terms were [hear, hear]. If the meeting did not insist upon that information and passed the Report they would leave the matter in the hands of the same gentlemen who had landed the Society in its present position [no, no]. The proposition he made was not an unreasonable one; it would not stultify the Council in any way, but on the contrary, strengthen their hands. There was amongst the Fellows a vast difference of opinion as to whether it was advantageous to the Society to keep these gardens in their possession. The Chairman told them he did not think the Commissioners wished to have the gardens. Who did wish to have them under existing circumstances? [hear, hear]. He, for one, did not want to see the gardens done away with, but he felt sure there were means to be adopted by which the Society might be relieved from that necessity, and the gardens kept on as well as ever. A Fellow asked him the expense of keeping-up the band. Well, they were told the band was to be discontinued for three months—September, October, and November, but they really ought not to have a band at all unless they had got money to pay it. He begged and entreated the Fellows to vote—not for the

rejection of the Report, and even if it were rejected it would not amount to a vote of censure;—but let them ask the Council to submit the scheme to them, and let them see what was going to be done. That would not reflect upon the Council at all, or place them in such a position that they must resign their posts. He hoped the Fellows would adopt some means of making the Society in reality what it was in name [hear, hear]. If they did not do so they should very soon have to get another name. Let them do everything they could to relieve themselves from the superabundance of debt with which they were surrounded. Let the Report go back to the Council—let there be an interview obtained with the Commissioners as speedily as possible. If that were done the matter might be brought to a successful issue, and the Society placed on a sure and certain basis [hear, hear].

The Chairman.—There is a motion before the meeting moved by Mr. Peach and seconded by Mr. Quilter. (His lordship here read the motion.) It is right the meeting should be accurately in possession of what they are voting about, and therefore it will possibly save time if I say, on the part of the Council, that the Fellows are now about to vote upon a question which the Council consider a vote of confidence [hear, and no]. At any rate the Society will feel we adopt the most manly course in stating at once the way in which we view any amendment to the Report which we now have the honour to present to you.

A Fellow pressed upon the Council the necessity of adjourning the question to see what arrangement could be come to with the Royal Commissioners.

Mr. Liggins said he was surprised at the last two speeches they had heard, because it was obvious to all men of business that if such an amendment was passed it would cast a stigma upon the Council which no man of honour could stand [cries of "no, no," and interruption]. The rule of all societies, from the House of Commons downwards, was that when such a resolution as the present was passed it amounted to a vote of want of confidence. They had no right to express opinions as to amity existing between the Council and the Commissioners without supporting that expression by their votes. He asked them to oppose that obnoxious amendment which had been brought forward in a manner which had astonished him. What after all was this Report? It was coupled with the accounts of the Royal Horticultural Society for the past year. It was more a record of what had been done than a programme of what was to come [no, no]. It was no use to say "no," because the Report was an account of what the Council had done. If these accounts were insufficient the Fellows must have expected them to be so, because they knew the Council had to struggle against the deficit left them by the gross mismanagement of the gentlemen in office before them ["no, no," and much interruption]. Was there any wisdom in the expenditure of £500 for a statue?

Mr. Quilter.—What statue?

Mr. Liggins.—Well, a statue, but I never knew the name of it [laughter]. The statue was the work of the late Mr. Foley. He contended that whilst they were in debt that was an expenditure of £500 unnecessary in the interests of horticulture. There was a legacy of debt equally unnecessary left upon the shoulders of these gentlemen. He begged to say the gentleman was wrong who said the late Council resigned. The fact was they were turned out [hear, no, and some interruption]. The Fellows, honestly and like Englishmen, turned them out, having lost confidence in their management. What had the present Council done? They had done everything to reduce expenditure and make the gardens pay. It was painful to them to have to reduce the prizes and the shows, but it must be remembered that the last Council had been spending vast sums of money they had no right to spend. It was all very well to say, "Oh, reduce the number of bands;" but if they did not make the gardens attractive their local Kensingtonians would fall off, and the few guineas they got back would melt away, and they would have no money for prizes. Let them remember the gardens were not of an altogether horticultural nature, but having got them they ought to do the best they could to retain them, and not let their landlords get them back [hear, hear]. Whether they did or did not desire to possess the gardens, there would be no difficulty in disposing of them at a profitable rate. But it was their duty, to the interests of the horticultural world, to retain these gardens because they encouraged horticulture. Although he was a Kensingtonian, his connection with the Society arose from his love of horticulture. If they passed such a resolution as that now before the meeting they would commit a great absurdity, because they ought to put the Council in the position the Commissioners believed they would be in. Did they suppose that if that meeting was adjourned for a month the International Commissioners would take any action during that month? Certainly not. They would say, "Oh, you are in hot water with your Fellows. You have passed no accounts, they will have nothing to do with you, and until they are passed we can do nothing." In conclusion, Mr. Liggins earnestly besought the Fellows to support their Council.

Mr. Peaches observed that the Report was simply a retrospective account of what had been done by the Society, and he could not see on what ground the meeting could refuse to receive it. They had decided on expunging from the Report the statements considered to be offensive to the Commissioners, and now that they were not in the Report he could not see any ground for postponing the reception of it [hear, hear]. He thought they were treating the Council in a very shabby manner indeed [hear, hear]. As a pretty close observer of the doings of the Society he must candidly say he was utterly at a loss to know on what reasonable grounds they wanted to find fault with what the Council had done. If they displaced the Council they would incur, justly or unjustly, the enmity of the Commissioners, and by the fact of doing so they put the Council out of a position in which they could communicate with the Commissioners. After a careful investigation of the accounts of the Society in the Report and those which went before it, he was bound to say these gentlemen had really done good work [cheers], and had succeeded in paying off a considerable accumulation of debt [hear, hear]. One of their primary objects was the reduction of their debt. Everybody knew they could not reduce their debt and increase their expenditure at the same time. Surely the best thing the Council could have done was to maintain the chief feature of the Society. There had never been any shows so good as those of last year, and for his part he should sooner see three good shows than thirty indifferent ones [hear, hear]. The Council had, he thought, exercised a sound discretion in determining to reduce the number of the shows and increase their brilliancy. He asked the meeting to pass the Report of the Council. Could anything be more insulting to a body of men than to reject their Report after, at the request of the Fellows, they had expunged from it certain phrases considered to be objectionable? It would be most ungentlemanly behaviour to do so, and he did not believe any body of gentlemen would lend themselves to such a proceeding. Now, as to the panaceas which had been suggested. One gentleman said they had only to get up a ball or a fête in order to clear off the debt of the Society. Well, when he was invited to come to an evening meeting there and found just twelve ladies and gentlemen in the room, he asked them, Could anything be more disheartening than such a state of things? What they had to do now was to pass the Report, which was simply a record of the past history of the Society for the year. He quite understood the remarks of the Chairman as to the Council being legally constituted if the Report was passed, and he hoped the meeting would not hesitate to adopt the Report [applause].

Mr. Edgar Bowring was understood to say he should support the Council's Report. With respect to the five hundred guineas expended on a statue, as the person most concerned in the matter was no longer alive, he would tell the exact circumstances. At the time this occurred the late lamented Prince Consort was President of the Society and of the Royal Commission. The Prince Consort thought much might be done for the progress of science and of the fine arts, particularly of painting and sculpture, in connection with the Society, and it occurred to him that sculpture and horticulture might be combined in the gardens. He brought up a plan whereby out of the profits of the Society a sum of five hundred guineas should be annually set apart for the purpose of inviting competitions, so that a sculpture gallery might be established in the gardens. That plan was brought before the Expenses Committee of the Royal Commission, of which he (Mr. Bowring) was a member. As the Commissioners received half the profits of the gardens it was quite clear their consent to the suggestion should be obtained. Well, it was under that arrangement that the beautiful piece of sculpture "Youth at the Stream" was ordered from Mr. Foley. The Commissioners were willing to run the risk and give half the sum towards the sculpture. The Society had the idea that if this could be carried out it would be of great advantage, not only to horticulture, but would do much to promote the cultivation of the fine arts in this country [hear, hear].

Mr. Walford regretted that he made the speech he had made at the last meeting, not exactly as to what he had then said, because that had grown upon him day by day, but because he had discovered a very great dissatisfaction existing amongst the members of the Society as to its future prospects. He had no personal object to serve. He did not want to serve on Council or Committees, or to take any part in the management, but he did want to see the opportunity for doing something, and doing it quickly, not lost. As far as the amended Report went the objectionable clauses had been withdrawn. That was all right; but there were certain paragraphs in the Report which required very careful consideration. The third last paragraph said, "The attention of the Fellows is specially called to the fact that unless the rent of £2400 is paid to Her Majesty's Commissioners next year, the lease of the South Kensington Gardens may be forfeited, and to prevent this contingency an increased revenue must be obtained." Then the Report went on to state that it was proposed to call a special meeting to consider the question of raising the revenue of the Society. That seemed to be all very right and proper: but supposing it should happen

that the scheme of the Commissioners was not approved, the opportunity they had now would be lost by adjourning the meeting. He had no wish to say a disrespectful word of the Council. He had a word to say about them at the last meeting, and he was sorry for it, but the cause for his remarks was no longer on the Council side of the table [hear, hear.]. But he should like to know how that change had taken place. It was known to them all that the time had now arrived when the Commissioners were prepared to discuss with the Council that which they were not prepared to discuss before. Was it wrong to say to the Council, "Don't shut us out from participation in any benefits which may arise. Adjourn the meeting to any day suitable to yourselves, discuss the question with the Commissioners, and come to us and tell us what you propose to do." Were not these business propositions? [hear, hear.] The Society accepted the Report, but deferred the adoption of it until they had a settlement of the scheme referred to [no, no]. It was all very well to say "no, no," but he only asked what was right and proper. There was no reason why these negotiations should not be made within the next month or six weeks.

Mr. J. H. Mackenzie rose to propose to the proposer and seconder of the amendment that they should withdraw it and not drive the meeting to a division [hear, hear]. He was surprised that Mr. Walford should not consider it possible for the gentlemen comprising Her Majesty's Commissioners to decline to negotiate with three thousand Fellows when they could do so with the Council. He had not heard a word fall from any Fellow to the effect that they all had not the fullest confidence in the Council [hear, hear]. Let the Report be adopted, and let it be left entirely in the hands of the Council to enter into negotiations with the Commissioners whether under bye-laws or Charter. It was said that a certain number of Fellows had a right to call a meeting, but he thought that the paragraph at the end of the Report was a very honourable pledge on the part of the Council [hear, hear]. The Council looked forward to meeting the Commissioners and laying before the Fellows the result of their communications. It would not do for them to ride too high a horse with the Commissioners, because to a certain extent they were under their control. He hoped the proposer and seconder of the amendment would withdraw it. As to the question of horticulture, he was sorry to read in Saturday's *Morning Post* a letter from a gentleman calling attention to a clique in connection with the Society. He (Mr. Mackenzie) had been mixed up with many public societies, and from his experience he earnestly entreated all gentlemen who wished to keep this Society in a straight path to help in abolishing cliques [cheers]. One thing he was quite certain of—that the Council were doing the best they could for the Society [hear, hear].

The Chairman.—In a meeting like this, gentlemen, it is well I should have you to understand that the Council are willing to concede and conciliate as far as they can do so consistently with their own dignity. And, gentlemen, I will say at once we are quite willing to give a day for the discussion of this question [loud applause]. You will be just as able then to discuss the question, and when the arrangements made with the Royal Commissioners come before you, will be just as able to put your veto on any of our proceedings as you are now; and you will have this advantage, that you will not have lost valuable time in dealing with the Royal Commissioners. Thus that objection falls to the ground. We only wish, in the interests of the Society, that you should pass this Report at the present moment [cheers].

Mr. Houguton rose to ask the Chairman whether the Council would consent to the Report being adopted at the meeting called for the purpose of discussing it [cries of "no" and "divide"].

The Chairman.—Perhaps it would facilitate matters if gentlemen would put their heads together and come to some arrangement.

Mr. Mackenzie earnestly entreated the Council, if they had brains, or sense, or judgment, as he believed they had, to enter into the negotiations with the Commissioners perfectly untrammelled.

Mr. Alfred Smee believed that the Commissioners wished well to the Society, and would do all in their power to promote its interests. There was much more danger to the Society than what came from the Royal Commissioners.

Mr. Houghton did not think any reflection was cast on the Council by the meeting asking them to adjourn the proceedings. Let them pass the Report and adjourn the meeting [" no, no," and uproar]. He should move "That the Report be adopted and the meeting adjourned to this day six weeks to consider any statement the Council may make" [loud cries of "no."]

Dr. Masters said he rose to second the amendment.

The Chairman.—There is no amendment at present before the meeting [cheers].

After a short discussion, the amendment moved by the Rev. Mr. Peach was withdrawn.

The Chairman said there was no other amendment before the meeting, and the subject now fell to the ground, as under the Charter they were prohibited from making a proposition as to the adoption of the Report.

Mr. Pinches moved, and Mr. Liggins seconded, "That the Report of the Council be now adopted."

Mr. Houghton.—I am now in order, and I beg to move the amendment I have just read.

The amendment having been seconded by Dr. Masters was put to the meeting and lost by a very large majority.

The motion for the adoption of the Report was then put and carried unanimously.

On the motion of Mr. Pinches a vote of thanks was given to the President, and then the meeting closed.

In consequence of the representations made by several of their regular exhibitors (particularly of florists' flowers), the Council of the Royal Horticultural Society have determined to hold all the Exhibitions as originally advertised in the schedule for 1875; but that to carry out the reduction of expenditure suggested in their advertisement in the gardening papers of the 18th and 20th February last by striking off the list the Exhibitions of March 17th, April 21st, September 1st, and November 10th, fifty per cent of all the several prizes offered in the schedule must be deducted, leaving the values of the medals as they are.

NOTES AND GLEANINGS.

On the 26th ult. a testimonial was presented to Mr. James Anderson of Uddingston, N.B., gardener to the late Thomas Dawson, Esq., and now nurseryman at Meadowbank. The form of the testimonial was a purse containing 150 sovereigns and a piece of silver plate bearing the following inscription:—"Presented, along with a purse of sovereigns, to Mr. James Auderson, Meadowbank, Uddingston, at a complimentary dinner in the Clyde Hotel, Bothwell, as a mark of recognition of his fame as a gardener while in charge of the renowned Dawsonian collection of plants, and esteem for his general activity and usefulness, on the occasion of his entering into business as a nurseryman." We wish Mr. Anderson every success in his new undertaking.

—— To test the merits of the new American Potatoes, Snowflake and Eureka, in this country, Messrs. Hooper & Co, of Covent Garden, London, have offered prizes amounting to fifty guineas for the best exhibition of them at the meeting of the Royal Horticultural Society to be held on the 10th November next. The conditions relating to them may be found in our advertising columns, or by application to Messrs. Hooper.

FORCING SEAKALE AND RHUBARB.

I can fully endorse what Mr. Keetley says respecting Gilbert's Rhubarb tubs or boxes. As a protection they are useful, but not more so than long stable litter. I know a market gardener who grows several acres of early Rhubarb, and he uses the stained straw from the stables, merely covering the roots with it in November. When the roots begin to push the stems raise the straw also, and form an excellent protection. The Rhubarb is fit to pull by the beginning or at least the middle of February, and is of a beautiful colour, and the flavour far superior to any that is forced with fermenting manure.

To have Rhubarb through December and January no plan is better, in my opinion, than to take up some good strong roots in October and place them in a warm cellar with a little litter round them, and water them occasionally with milkwarm water. In March cut-up the crowns, leave a good piece of root to each, then make holes 18 inches in diameter and 3 feet from centre to centre, place the crowns against the sides of the holes triangularly, then fill-in with good rotten manure. Do not pull any during the next two summers, when the roots will be in excellent condition for taking-up again.—J. Saunders.

MRS. PINCE versus LADY DOWNES' GRAPES.

I quite agree with Mr. Harrison Weir that Mrs. Pince is a good Grape. As it is grown at Loxford it is large in bunch and berry. It sets well; and though not so rich in flavour as Muscat of Alexandria grown alongside of it, still it is superior to Alicante, Gros Guillaume, and Lady Downes'. One fault it has—it does not colour well, nor does it keep anything like so long as Lady Downes'.

My reason for noticing Mr. Weir's letter is, that he says he has pulled up all his Lady Downes' Grapes in favour of Mrs.

Pince. Now, if Grapes are required in March and April, as far as my experience has yet gone Lady Downes' is by far the best. Mrs. Pince will not keep so long in good condition; moreover, it is a Grape that is not esteemed in Covent Garden Market because of its bad colour. Lady Downes' brings a much higher price even when Mrs. Pince can be obtained. I know of one extensive grower who is cutting out his Mrs. Pince in favour of Alicante and Lady Downes'.—J. Douglas.

FLOWERS FOR OUR BORDERS.—No. 48.

SWAINSONA GREYANA.—Captain Grey's Swainsona.

The Swainsona Greyana is a half-shrubby plant, 2 feet or more high. The genus is allied to the Coluteas, which are, however, very readily distinguished by their curious, inflated, bladder-like seed-vessels, as well as by the two callosities on the standard.

The Swainsonas are numerous, but only four or five species are generally cultivated. Of these the best known is the old

Fig. 49.—Swainsona Greyana.

S. galegifolia, with sweet-scented flowers of a bright red colour and of a similar habit to our plant; there is also a white variety of this species. The S. coronillæfolia has rosy-purple blossoms, and is well worth cultivation, but is less generally seen. The S. pallida is an exceedingly pretty variety or species, we are not quite certain which, with pale rose-coloured flowers. All of them are natives of New Holland, the S. Greyana of the neighbourhood of Port Adelaide, and are therefore too tender to bear full exposure; but they succeed well in the open border during the summer months, where they will flower for a considerable period. The whole are very desirable plants, but the present species is certainly the handsomest of the genus, its long spikes of purple flowers producing an extremely showy effect. They will need to be removed from the ground in winter, but a good dry cold frame or pit will be a sufficient protection; in the south of Ireland, and other favoured corners of the kingdom, we have no doubt that they would bear exposure if planted against a wall and matted-up; we believe galegifolia has been thus grown. As, however, their protection in a frame or cold pit entails no greater amount of trouble than in the case of the Verbena and other plants of that class, we would advise their removal from the ground in autumn.

They may be increased by seeds, which are readily procurable, and should be sown in a strong heat; cuttings of the young shoots will also root under a glass with the assistance of a slight bottom heat, and if struck early in the spring will form flowering plants the same season. The soil best suited to all the species is a light sandy loam with a small proportion of heath mould; if grown in pots they should be well drained, and be frequently syringed to keep down red spider. —(*W. Thompson's English Flower Garden, Revised by the Author.*)

CŒLOGYNE CRISTATA.

Many of your correspondents have at different times sung the praises of Cœlogyne cristata, and yet I venture to add another testimonial in its favour. I have a plant now in my drawing-room with eight spikes and twenty-five flowers all open at once, the majority of which have opened since it came into the room where it has been about a fortnight. It seems a most accommodating plant, and may be treated amongst other flowers in an intermediate stove.

Without any of the capriciousness of most Orchids, it never fails to flower every year, and, while it will stand a comparatively cool treatment, does not seem to mind the heat of a stove in the growing season. It may easily be made to bloom in December and January, and as the flowers are pure white with the exception of the yellow-crested labellum, and are very graceful, it is a beautiful ornament for the hair or for a bridal bouquet, and has the merit of lasting a long time when cut.

Mine is only a medium-sized plant in a 7-inch pot, but, as the individual flowers are large and the trusses evenly distributed, it is very effective. It has another merit too, that for an Orchid it is by no means an expensive one.

If I could induce others who, like myself, have no Orchid house and cannot take up the mania, still to grow a few of those that will bear an ordinary intermediate stove treatment I should name the Cœlogyne cristata as one of the very first to be procured, and next to that the Dendrobiums densiflorum and nobile, and Odontoglossum Alexandræ.—P.

PEARS NE PLUS MEURIS AND BERGAMOTTE D'ESPEREN.

Mr. Cunningham, on page 140, has made some practical remarks on Pears. He names amongst others two kinds which are worthy of extended cultivation, and at the same time suggests that experience is necessary to prove the merits of new varieties; he is also sensible of the effects which different soils have on the quality of the fruit. I have had experience with the above-named sorts, both of which Mr. Cunningham mentions as useful, hardy, free-bearing varieties, and have proved the extreme variation of one of them under different soil, conditions, and mode of culture.

For several years I gathered fruit from a standard tree of Ne Plus Meuris. This was grafted on a Crab stock, and was growing in a rather strong and cold loam. The tree invariably produced a great abundance of fruit, but which was as invariably of a third-rate quality for dessert purposes, and was, in fact, only "very good for stewing." Now, had judgment been given on the experience with this tree alone it would most decidedly have ruled against the variety as a dessert Pear. I have, however, had further experience with the same variety grafted on the Quince and grown in soil of a lighter and warmer nature, and trained on a west wall. The fruit from this tree has always been of the very first order of merit; indeed, no Pear in the garden could surpass it, and very few equal it in quality. The tree was, moreover, a great and certain bearer, and was every year most serviceable to the gardener and its fruit greatly esteemed by the owner. This is a striking instance of the changeableness of a fruit under varying cultural conditions—the quality from one tree being always indifferent, while that from the other was not easy to surpass; indeed it was, and is, considered to be the best Pear in its season (December and January) which the garden produces. Ne Plus Meuris is also adapted as a bush or pyramid tree grafted on the Quince, and if the soil and situation are favourable it will produce heavy crops of good quality, but for a wall it is unhesitatingly recommended.

Mr. Cunningham also mentions another Pear of great value —viz., Bergamotte d'Esperen. If I were driven to name the one best late Pear for general dessert use I would pin my faith on this variety. I have had experience of its good qualities as a standard on the Pear stock and as espaliers and wall trees grafted on the Quince, and in all these forms it invariably gave the greatest satisfaction. This Pear has a very hardy constitution, and its blossoms often escape injury by the frosts of spring when some other varieties fail under their effects.

I am acquainted with a gardener whose standard tree of

Bergamotte d'Esperen has not failed to yield him a heavy crop of fruit for many years past, and he never fails to sell this fruit in March and April at 4*d.* to 6*d.* per lb. A few years ago I advised an amateur, who was planting bush trees as a means of profit by sale of fruit, to plant half his ground with this variety. His confidence was not sufficient to risk that number, and he planted one-fourth. He now wishes he had planted the whole piece with this useful late kind, which has given him a better return for outlay than any sort in his garden.

I am not aware that these instances are exceptional, and, having no other end in view than to establish the merits of any good fruit, I shall be glad to hear if it has failed with other cultivators, and under what conditions. At the present I am of opinion that it is insufficiently grown, as being hardy, productive, excellent, and one of the best of late-keeping Pears. This variety and Ne Plus Meuris are, I am satisfied, two very recommendable Pears, and am glad Mr. Cunningham has directed attention to their merits.

Occasionally late Pears will not ripen, but shrivel instead. When this is the case the first supposition is that they have been gathered too early. This is unquestionably a common cause of shrivelling; but what when the fruit is left until it drops off the trees and still shrivels? In that case the fruit has been stored in a place at once too light, warm, and airy. I was led to this conclusion by fruit which had been inadvertently left on the ground and covered with leaves. This fruit remained quite firm, while that gathered from the trees —not prematurely—and stored as above shrivelled. By keeping in a dark, cool, and damp rather than a very dry place, I have found the premature shrivelling of late Pears considerably obviated.—A Surrey Gardener.

ROSE TREES AND THE INTENSE COLD.

One curious effect of the late severe winter on Rose trees is worthy of notice, as it coincides with what I have before observed, but which seems contrary to the recognised theories. It is generally said well-ripened wood will stand frost better than young and immature shoots. Now, on looking over my Roses before pruning I find that the young wood made last autumn has stood the frost, while old wood on the same trees has been killed. If my Roses had been grown as standards I believe nearly every one would have been killed outright. It is my practice every year to cut out down to the ground every shoot that is more than two years old. For instance, at the next pruning in March I shall only leave two shoots, or rather shoots of two ages—that is, last year's growth and that of the previous year. By these means plants are induced, when on the Manetti stock with their buds sufficiently deeply buried, to throw out young suckers from the base every year.

Now, at this time of the year I have on my trees wood of 1874, 1873, and 1872, the latter of which in the natural course of pruning I should cut away; but, strange as it may seem to most, in nearly every instance the 1872 wood is dead, while the growth of last year on the end of the same shoots is still alive, though, of course, fast dying. The wood of 1873 is much injured, while the young wood of last autumn is in nine cases out of ten not injured at all, especially those growths which were most succulent. There is a remarkable instance of this in the case of a fine plant of Maréchal Niel trained against a south wall in my kitchen garden, with a glass coping 2 feet wide over it. The young shoots under the coping were quite green and fresh at first, but the older wood, some of which was 1½ to 2 inches in diameter, is quite killed in spite of the protection; but a very succulent young sucker which had pushed from the base in September and had grown with great rapidity to about 5 to 6 feet long is still alive, and to all appearance the only live part in the tree, and yet, owing to its having pushed its growth more away from the wall, was more exposed than any other part of the tree.

If this were a solitary instance we might consider it a freak, but I cut down an overgrown bed of Roses in August to make them start afresh, and in this case also the young wood has not suffered. How can this be accounted for? My theory is this—there is always a certain amount of sap left in Rose shoots; the severe frost we had last winter turned this to ice. In the older shoots, as the bark was hard and the wood also hard, neither would give way under the expansive power of frozen sap, so the cells containing the sap were injured. In the other case the shoots are full of soft pith within, and the bark was not hardened, so there was freedom of expansion and the cellular tissue was not damaged. I should like to hear the opinions of others, and also practical experience of others, with regard to damage by frost.—P.

RASPBERRY CULTURE.

"D., *Deal's*," paper on fruit, page 137, contains a note on Raspberries which even "my lord's" gardener might read with equal pleasure and profit, for it undoubtedly contains the pith of the matter.

There are various methods of management and arrangement, such as planting the canes 5 feet apart, tying five or six canes closely to a stake or singly around a hoop, spreading them out fan-shape, bending them to a given angle, or pruning the erect canes to various lengths. Each plan has had a fair trial, but none has proved so thoroughly efficient and profitable as that of planting single canes in rows, pruning them to a uniform height, and tying them to a couple of strained wires.

Having had occasion to pay more than ordinary attention to the culture of this fruit, a few words concerning a failure and its remedy may prove useful to others. In planting a few rows about four years ago no particular care or preparation of stations was thought necessary, although the soil was obviously the reverse of rich. Unbroken success had very likely given me an impression that the Raspberry would thrive anywhere and in almost any kind of soil, and this feeling was strengthened by the sight of a bed of "wild" Rasps growing luxuriantly in an Alder swamp within 100 yards of the garden. The soil was therefore simply trenched, manured heavily as for vegetables, and the Raspberries planted. A tolerably vigorous growth yielding fruit in due course was the result; but I was not satisfied; the fruit was neither so large nor plentiful as was required, and I resolved to start afresh, reserving the old plants for present exigencies.

In making the new bed particular attention was given to ensure a robust growth, which in the Raspberry implies an abundance of fruit, and to arrange the whole so as to make it an easy matter to protect the fruit from the ravages of birds. This was managed successfully by making the rows side by side 5 feet apart, and with the plants 1 foot apart in the rows. Trenches a yard wide, 2 feet deep, and filled with the soil—leaves and dung of some old hotbeds well chopped and mixed, being prepared for each row. Large fruit and plenty of it was the object in view, and Prince of Wales was chosen as the best kind for culinary purposes, its fruit being very fine; but as it is not so sweet as some, it would probably not be generally liked for a dessert fruit.

It was reasonable to suppose that this careful preparation of the bed would induce proportionate results, but I must confess I certainly did not expect to see anything like the extraordinary vigour of the first year's growth. Not only did the roots spread over the trenches, but they quickly met and became interlaced in the alleys, the entire surface soon bristling with suckers, which could only be kept under by repeated hoeings. The canes left to grow in the rows were wonderfully robust; and the old canes, which had been shortened to about a foot at the time of planting, put forth some shoots bearing such good fruits as to cause one to regret having shortened them so much. I do not, however, think it good practice to leave the canes of a new bed unpruned as is sometimes done, but would always reduce them to 1 or 2 feet. In autumn when the leaf had fallen two wires were strained along each row, one 2 feet from the ground, and the other about 3 feet 6 inches; the canes were then pruned a uniform height of 4 feet, tied upright to the wires, and the work was complete.

The bed has now been in full bearing for two seasons, the fruit being both abundant and fine. A heavy annual top-dressing of manure is given to the alleys. The soil is never disturbed, but remains intact just as it was left after the planting. As the fruit ripens the bed receives one or two thorough soakings of water or some liquid manure, which proves very beneficial to the crop, making the latest pickings of fruit quite equal to the first in size and colour.

The fondness of many birds for this fruit renders protection as necessary as for Strawberries; without it no watchfulness will avail. Only let the bed be left unguarded for a few hours, especially in a dry season, when down swoop blackbirds, thrushes, sparrows, and robins, making clean work of every ripe berry. This may not happen in market gardens in a situation unsheltered by trees, but it is invariably the case in private gardens having the usual adjuncts of shrubbery or woodlands; and the plan which dire necessity compels me to adopt is to envelope the entire bed with stout fish netting

stretched upon a light framework of poles made sufficiently high for walking under.

It may be well to remind beginners that trenches filled with manure and rich soil as I have described may readily be adapted to the culture of most bush fruits, but they would be totally unfit for fruit trees. Raspberries and kindred fruits of lowly growth love a deep, cool, rich soil, and it was a knowledge of this fact that induced me to adopt a plan which success has proved to be right.—Edward Luckhurst.

AURICULA GROWING UNUSUALLY.

What is the proper mode of treating an Auricula which has grown up with a bare stem and throws out no offsets at the collar? One writer says that one may safely cut off the lower part of the root, so as to replant deeper; but I cannot but fear that a large root cut through might rot and ruin the plant. —G. S.

[Never having had an Auricula that grew up in this mode I feel hardly competent to advise, but certainly cutting-off would not do. I should suggest planting it deeper.—D., *Deal.*]

THE MINISTRY OF FLOWERS.

I was once told of a gentleman who, passing through a street in London, had his attention arrested by a poor woman stopping to gaze at some flowers he was carrying, and, with tears in her eyes, exclaiming, "Thank God, I have seen a flower!" He was so touched by the circumstance that he gave her the bouquet. This happened some years ago; but the sweet bright flowers are nearly as rare and quite as precious to the dwellers in the flowerless sunless alleys now as then.

The influence of a few flowers was lately shed in the immediate neighbourhood of the "Refuge." Watch the opening of a box—the spring wayside flowers it contains have been gathered by little school children in a far-off country village, and the loving offering accepted and used for the refreshment of the weary ones cooped-up in the tiny dark stifling rooms in the east end. Listen to the joyous shout of our rescued little ones as Daffodils, Primroses, and Violets are in turn unpacked! Follow the sweet blossoms to the room above, where the widows gather for their work, and listen to the praises falling from those white pinched lips.

Come with me next to a close gloomy attic in a street hard by. In a corner lies a poor invalid, the tiny flame of life fast dying out. See how the dim eye sparkles for a brief moment as it catches sight of the fragrant nosegay the Bible woman carries; bend down gently, and watch the wan face as a smile of welcome to the beautiful flowers plays over its features; then she raises them to her lips, and kisses them, oh, so tenderly! and we can just hear the faint whisper, "My Father has sent them to wile me away home." Before the cock crow she is gone, "wiled away home" in very truth.

The mission of those flowers is not yet ended, but I will only mention one more incident.

A letter from a dying emigrant girl to her mother, who lives in one of the worst courts, has to be taken. But a short time since it was said to be impossible for the workers to venture there. However, the work must be done; so Miss Macpherson sets forth, accompanied by one of her helpers, and carrying a bunch of the flowers. Entering the court she is besieged by little children and rough women, whose eyes are black from fighting, all clamouring for a flower. One by one the flowers are given; and oh, the softening influence they exercise!

The way into that court is now opened, and we know the little flowers have accomplished their mission. This mission sprang from a very trifling incident. Some five or six Snowdrops were enclosed in a letter, little thinking of their destiny. Soon after word came that the lady had shown them to her sewing class of poor widows; the flowers were passed round for each of the two hundred "to have a smell," and then divided they were carried to cheer three dying persons, one of whom expired clasping the little flowers.—E. A. H., *Home of Industry, Commercial Street, Spitalfields, E.*

[Extracted from "Woman's Work," with part of a letter from the authoress added.]

If Miss Stanley would like some Laurustinus sprays in flower and also Ivy sprays I can send her some. In due time there will be plenty of Lilacs (coloured); these she can also have. I will also send her one consignment of Roses in due time. I cannot offer more, as people come from Southampton and other places far and near to see the Roses, and would be much disappointed if they came and found the best Roses cut and sent away.—(Rev.) W. F. Radclyffe, *Okeford Fitzpaine, near Shillingstone, Dorset.*

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 30.

I have long felt that some injustice is done to the beetle race by various epithets applied to such insects, and by figurative allusions in which they appear. "As blind as a beetle" is a familiar phrase decidedly erroneous in its generalisation, though there are some beetles which, if not positively blind, do not make extensive use of their visual organs. Perhaps the misapprehension in this instance has arisen partly from the blundering way in which some beetles move along. My friend the Dor may be taken as an example (he is already beginning to sniff the approach of spring); but I myself set down his peculiar movements not to imperfect vision, I rather ascribe them to remarkable obstinacy. A phrenological examination of the skulls of beetles would probably prove that in this order firmness or resolution are more marked qualities than in any other order of insects. "Beetle-headed" in some counties is, I am told, a phrase employed to denote human stupidity; but it is very unfair in its application to the insects of the Coleopterous order, which are quite as wise in their generation as any of their brethren. Then, again, what an insult it is to all respectable beetles that such a villainous scamp as the common cockroach should be called a black beetle! though the mistake doubtless arose from some non-entomological domestic imagining that the cockroach was the same creature as the beetle designated popularly the Churchyard Beetle (Blaps mortisaga), not by any means confined to churchyards and the like places, but common also in yards and sculleries in various parts of London, and found in country dwellings frequently—a scavenger not without utility in its way.

These and other causes have made the name of beetle rather an opprobrious one, and occasionally, when I have been pointing out to some one a beautiful insect of the order, I have been met by an incredulous smile, as much as to say "That can't be a beetle." Some of the handsome Cerambycidæ, such as the Musk Beetle (Aromia moschata) certainly offer a great contrast to some of the gloomy-looking species. Our illustration (fig. 50) exhibits the imago and pupa of Cerambyx Heros, a species much resembling our own Musk Beetle, but of larger dimensions. Like others of the Cerambycidæ this beetle visits gardens, not with any particular ill design. Its larva feeds upon wood, and the older authors gave most of the Cerambycidæ a good character, stating that they only fed on decayed or decomposed wood; but Mr. Newman asserts, in a recent number of the "Entomologist," that these larvæ prefer sound wood, and therefore to an extent they may be regarded as hostile to the plantation if not to the garden. We do not, however, make much account of the injury we receive from Cerambyx larvæ, because our trees have so many enemies more serious. Just so does the Londoner trouble himself little about the ninepence per ton he has to pay for the City dues in the face of the exorbitant advance of twelve shillings or so which the merchant has now added.

The long necklace-like antennæ of the Musk Beetle are occasionally an impediment to the creature's free locomotion. A party of them has been observed on a tree trunk with their antennæ singularly interlaced and entangled. Whether they had drawn together in sport, or whether, like wild bulls, they had engaged in combat, is not known. The elytra or wing-cases display a variety of tints; the green ground is shot with a bluish tint, or with purple and gold: on the surface of the thorax and abdomen are also fine indentations. Taking its name from the Musk it is really better entitled to be called after the Rose, the scent having most resemblance to the perfume of the Sweetbriar, and therefore decidedly agreeable. It will adhere to the hand for some little time after the insect has been taken in the fingers; and Mr. Wood concludes, from his observations on the species, that the insect can emit or suppress this at its pleasure. As one man's meat is another's poison, so what is an agreeable odour to some beings is as repulsive to another; and if we regard the scent of A. moschata as one of its means of defence, there must be some foe deterred thereby from seizing it. Birds there are which prey upon such seemingly uninviting morsels as these hard-cased insects. A peculiar chirping sound is produced by the Musk Beetle, not

caused by the friction of the shank of the legs, as in the vocal performance of the grasshoppers, but traceable to a movement of the head. It has been compared to the shrill cry of the bat, though really it is a louder sound. Many entomologists have discovered the larvæ and pupæ in Willow trees. The fat muscular larva of the species is probably a creature of slow growth. The pupa, as seen in the illustration, of an allied Cerambyx exhibits curiously the parts of the future insect. I don't know how it may be with others, but these beetle pupæ always bring to my mind the recumbent figures of Crusaders, to be seen in stony stiffness on various antique monuments.

A pretty beetle, also a visitor to gardens and fond of flowers, is the Wasp Beetle (Clytus aristis). The resemblance to a wasp is rather superficial; still, the rapid vibration of its antennæ and its plan of dodging in and out amongst the leaves are a little startling; but the antennæ are much longer than those of the wasp, though short as compared to some of the Cerambycidæ. The general colour of this beetle is black, the elytra being banded with yellow, some specimens having yellow spots in addition. Though the species is of moderate size, the larval state lasts two or three years. Strangalia armata, a beetle nearly allied to the last named, has a penchant for umbelliferous flowers in field and gardens, popping out of view directly any person approaches it. It has been called "armed," because the elytra are deeply cut and toothed at the edges. The contrast of colour in different specimens is striking, the black and yellow being interchanged, some having one, some the other, as the ground colour.

Not a few gardens are to be noticed, skirted perhaps on two or three sides by a Hawthorn hedge. Much as I love the Hawthorn, the "bonnie May," I question whether it is a good plant to form a hedge of, at least for a flower garden; in the case of a kitchen garden there may be less objection. From a Hawthorn hedge individuals of the species designated Timarcha lævigata make their way into gardens. I have seen them in Surrey nursery grounds where their presence occasioned needless alarm, for the beautiful insect is comparatively innocuous, for apparently the larvæ eat nothing but Hawthorn leaves, and it is questionable if the imagos eat at all. Both bear a marked resemblance to each other. The perfect insect has from its peculiarity of emitting a red fluid from the mouth received the name of the Bloody-nose Beetle; this secretion, however, does not appear to be acrid. To the unaided eye the plump body looks black; only by the application of a glass do we perceive that the colour is an intense purple, varied with a greenish gloss. The upper side of the body is dotted over with small punctures; and the tarsi or feet are especially deserving of inspection, as they have broad pads, which

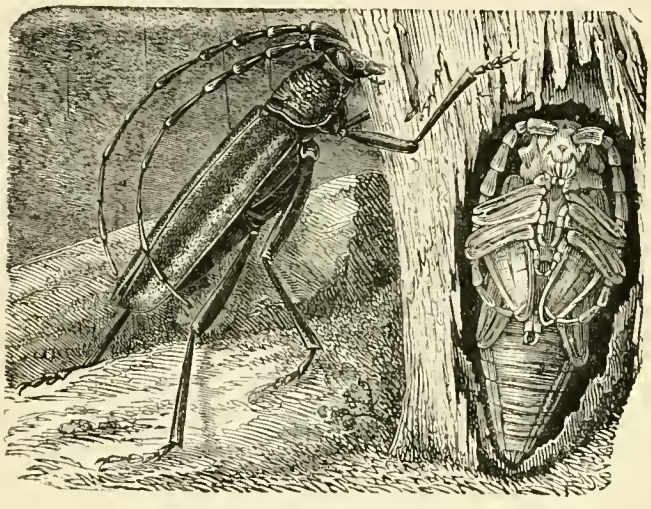


Fig. 50.—Imago and pupa of Cerambyx Heros.

Fig. 51.—Xylopoda fabriciana.

strengthen the grip of the beetle on the leaves or twigs, otherwise its heavy body would render it very liable to capsize. The equally fat but still softer larva must be a *morceaux* to a hungry bird, unless it has an unpalatable flavour.

Unpromising collections of dead leaves swept-up in corners at random at this season contain some minute pupæ of various small but splendid moths, waiting the spring to call them forth in the winged state. Most of the species of the genus Lithocolletis contain examples of some of our smallest moths, which are splendid in colouring, with wings deeply and delicately fringed; these pass the winter in the pupa state, when many are killed by the frost or moisture. The bulk of these small species do no harm worth mentioning, but there are one or two notable as disfigurers of garden plants. Thus, the elegant species L. emberizæ pennella, of silky aspect, yellowish, and barred with white, has a larva that leaves behind it an unmistakeable impress on the Honeysuckle. Wherever this insect occurs the foliage of the plant is at first contorted, and by-and-by it exhibits pale patches, and finally the leaves twist and drop off.

Scarcely any of the species of the genus Lithocolletis have received English names, which is quite as well, since so large a proportion of the vernacular appellations are either silly or inappropriate, such as Carpets, Veneers, Quakers, and all that category. One pretty Lithocolletis a well-known popular author on natural history calls the Brown Dolly, because the brown markings scattered over the white wings bear a slight resemblance to a rude wooden doll. A microscope brings out the beauty of the insect, and shows up the contrast between the creamy white and the rich brown. As the larva feeds on the leaves of Hazel it has received the name of L. corylella. Some of the minute pupæ of the genus Nepticula are also detectable in winter, but most of these, having become full-fed, quit the leaves they have been mining, and make compact cocoons of silk attached to a stem or twig. Here, again, we have various tiny yet splendid insects; thus, N. plagicolella has wings of a brown colour shot with rich violet; across them runs a bar or stripe of bright silver. Amongst the Tortrices (the familiar, and in some instances troublesome, leaf-rollers, while they are larvæ) we have many beautiful moths, though half an inch to three-quarters is about the average size. Amongst those likely to be visitants to our gardens is Xylopoda fabriciana (fig. 51) and Tortrix roborana.

In closing this series of papers, in which I have not pretended to treat the subject I have taken in an exhaustive manner, I would call attention to a valuable little volume from the pen of Sir John Lubbock on "British Wild Flowers in relation to Insects." Though not dealing specially with the work of flower-fertilisation as carried on by insects in gardens, it contains information which will be of interest to every horticulturist. Amongst the curious facts it contains or hints at is this somewhat surprising one—that it has been supposed by some students of this branch of science that the genus Thrips, much disliked, and with good reason hitherto, on account of the ravages committed by its prolific hosts, may aid in a degree in bringing about the due impregnation of the flowers it frequents.—J. R. S. C.

Hot-water Joints.—A short time since you printed a communication recommending rope and Portland cement for joint-

ing hot-water pipes. I have tried this and various other methods, and much prefer plaster of Paris to cement. The joint is ready for use in ten minutes, and is easily cut out if required.—J. T.

DALKEITH.—No. 2.

Little if anything of a purely ornamental nature is noticed in this paper, the notes being principally devoted to fruit, for which Dalkeith is so deservedly famed. The great master of Grape culture, Mr. W. Thomson, here achieved some of his greatest triumphs, and his able successor, Mr. Dunn, has won an honourable place in the roll of British gardeners by his excellent practice and successful results. Before entering the houses it may be observed that the illustration (fig. 52),

Fig. 52.—Montague Bridge.

gives a rather inadequate idea of the Montague Bridge with the little natural cascade and foaming river bounding over its stony bed below. Another (I think north-east) view of the Palace is seen in the distance with the Ivy clinging to its old walls, and from this spot the prospect is not devoid of the picturesque. This, however, is not the theme, and we hasten into the houses and briefly discuss their contents. The glass ranges are very extensive and are in excellent order and keeping.

The first house we enter is a Muscat vinery 80 feet long, 18 feet wide, and 15 feet high, in which there was a good crop of various sorts of Muscats and late black Grapes for winter supply. Muscat of Alexandria, Tynninghame Muscat, Barnes' Muscat, Early Muscat, Archerfield Muscat, and Scott's Muscat are all growing in this house side by side with no perceptible difference between them—in fact, if the labels were detached from the Vines it would defy the cleverest expert to tell the one sort from the other. Scott's Muscat is here thought to be the best of the above varieties, being, perhaps, the best setter and having the strongest constitution, finishing its bunches rather better, but the ripe bunch is not to be distinguished from a well-finished Muscat of Alexandria. We also noticed good examples of the Duchess of Buccleuch Grape with berries considerably larger than usual with this variety, which is generally not worth growing except where high flavour is appreciated. The black Grapes consisted of good Alicante, a very useful winter Grape; Gros Guillaume (Barbarossa or "Seacliffe" Black); Muscat Hamburgh (does badly here on its own roots, and is being all inarched or grafted on Hamburgh or Muscat stocks); Madresfield Court, grafted on Lady Downes', with good bunches and magnificent berries, the largest in the house, having a fine flavour and keeping well. It is liable to crack if care is not taken to protect the roots from excessive wet after the berries begin to colour. It is kept quite dry here and never cracks, but has done so when watered after showing colour. Gros Colman had a good crop of moderate-sized bunches and splendid berries, but deficient in colour and coarse in flesh and flavour, and, on the whole, not equal to the Alicante in use at the same time—that is, mid-winter. Mrs. Pince's Black Muscat is also grown here and in some other of the vineries, but it is to be discarded, as being very unsatisfactory, neither finishing properly nor keeping well, nor having the slightest taste of Muscat flavour.

The earliest vinery is 60 feet long and 11 feet wide. It is a nice, useful, compact house with the border wholly inside, and heated underneath by hot-water pipes, which are, however, seldom used, and are not approved of except in cold wet soils, and then they must be used with extreme caution. The Vines are two years old and coming into good bearing condition. They are started in October to be ripe by Easter, the supply of old and new Grapes always overlapping each other by a few weeks. The late-kept Lady Downes', as long as they will keep, being preferred for flavour, although the new Grapes make the handsomest dish. The back wall of this house, as well as of the Pine stoves, is fitted-up with shelves for Strawberries and French Beans, which are forced in large quantities. Of the latter Osborn's is found to be the best in size, flavour, and productiveness.

We now turn into the late vinery, a lean-to, 100 feet long and 12 feet wide. Black Lady Downes' is the principal sort grown, and is bearing a good crop of even-sized well-finished bunches with splendid berries. White Lady Downes' also does well in this house, and, except in colour, is an exact counterpart of the black variety. Both keep equally well on the Vines till the middle or end of April, when the last bunches are cut to allow the Vines to be started. To prevent bleeding the shoots on which the bunches hang are all disbudded early in February back to the eye required to start, and the shoot ringed outside that eye to prevent such a flow of sap to the bunch as would burst the berries when growth begins. Flavour being a first consideration here, this plan is adopted in preference to cutting the crop in February or March, and keeping them in the fruit room on the bottle system, by which means they keep well enough, but are found by Mr. Dunn to deteriorate in flavour. A single Vine of a few other late sorts is grown in this house for variety, Trebbiano and Black Alicante being the best of them. The supply from this house meets the earliest vinery in April, and so long as the old fruit lasts it is preferred for eating, however fine the early Grapes may be. Leaving the vinery we take a peep into three ranges of old-fashioned single-light pits each 150 feet long, in which are grown the succession and sucker Pines, Cucumbers, Melons, and plants, all looking well.

We now enter a pair of lean-to houses 80 feet long and 14 feet wide, the first one being a Fig house, in which the Figs (White Marseilles) are planted out in a bed in the centre of the house, trained as bushes, and yield good crops, which are ripe in April. This Fig is found to be very prolific, and of delicious flavour if kept in a cool fruit room for a day or so after being gathered ripe. A few other sorts of Figs are grown in pots on a stage, but none of them equal the one named in productiveness and other good qualities for forcing. The other division is an early Muscat vinery, the crop being ripe and cut in June for the London season. The Vines are old and worn out, and the roots being wholly in an outside border it is surprising they bear a crop at all; but house and Vines very much want renewing. The leaves being off the Vines, a bed in the centre of the house was used to ripen-off a good batch of Tea Roses in pots, amongst which we noticed some very fine plants in 12-inch pots of Maréchal Niel and Gloire de Dijon budded upon a seedling Briar by Mr. Hugh Dickson, Belmont Nursery, Belfast. They were young plants received from Mr. Dickson last winter, and being potted and grown-on liberally they have each made several growths 12 to 14 feet in length; being strong and healthy, and ripening-off well, there is every prospect of their producing good crops of their beautiful flowers, which are always in demand, and especially early in the season, when these will be in flower.

We now come to the principal range of forcing houses. These are lean-to's about 370 feet long, divided into nine compartments of unequal lengths and widths. The first house we enter is the earliest Peach house, ripe in the beginning of May, the next following closely at its heels, and the third ripe in

the middle of June. The wood was ripened and the trees had nearly shed their leaves, but looked well for a crop next season. The soil here suits Peaches, and they are generally a successful crop. Amongst many sorts grown, Stirling Castle Peach (true) and Elruge Nectarine are found to be much superior to any others tried for forcing, and never miss a good crop of fine-sized excellent-flavoured fruit.

The fourth house in the range is a greenhouse, filled with Indian Azaleas in all sizes up to 6 feet high and about as much through. They were clean healthy plants well set with flower buds, and mostly trained as pyramids, but not too stiffly. They are all forced into flower between December and April, and are one of the most showy and useful class of plants that can be grown for that purpose. On the front stage and at the ends were a lot of free-grown Epacris, the young shoots studded with flower buds, and some good specimens of standard Epiphyllum, also laden with buds, and resting preparatory to being pushed on for Christmas decoration.

The fifth house is a tropical fruit house, the centre bed being planted with Bananas (Musa Cavendishii), which ripen fine bunches during the summer, and are highly appreciated by the family. Monstera deliciosa is also fruiting freely here, and when well ripened in a high temperature it is found to be quite delicious and a great favourite at table. Along the front stage were growing useful plants of Eucharis amazonica, Ixoras, Crotons, Dracænas (amongst which, conspicuous for their fine colour, were reginæ, Cooperii, and stricta variegata), flowering Begonias, variegated Cyprus, &c., and also a nice plant of the new Curculigo recurvata variegata with seven or eight full-grown and beautifully coloured leaves, forming one of the handsomest of table plants, and decidedly a great acquisition.

The remaining houses in the range are early vineries, from which the crops were cut in May, June, and July. One house is chiefly Black Hamburgh, the Vines evidently past their best, and are to be renewed in rotation with the others in this range. The available soil here is found to be too light in the texture for making good lasting Vine borders, and requires to be frequently renewed and highly fed to produce good crops of Grapes. Another house is planted with Muscats and Frontignans, and the next with Black Hamburgh. A Vine or two of each of several other sorts of Grapes than those named are growing in these vineries, such as Foster's White Seedling and Buckland Sweetwater, both good early white Grapes; Golden Champion; Duchess of Buccleuch, first-rate flavour but otherwise not profitable; the new Grape, Duke of Buccleuch, has been planted or worked on others in each house, so as to fully test its forcing and keeping qualities. If it will stand hard forcing and finish well in March, April, or May, it will be the greatest acquisition amongst white Grapes since Muscat of Alexandria was introduced. From what is known of it here good hopes are entertained that it will accomplish all that is expected from it.

Leaving this range we proceed by the west walk outside the kitchen garden to a long range of glass on the south wall extending to about 450 feet, and 9 feet wide. The first half we enter is devoted to Apricots and Figs on the back wall, and a line of Pear trees in pots between the path and the front. The Pears in pots are not satisfactory, and are to be replaced by Plums and Cherries planted-out and trained to a trellis reaching about halfway up the roof, which will be much more profitable than the Pears in pots. A good collection of Chrysanthemums was doing well in the shelter of this house, but the main stock of them were still outside plunged in a south border, as they are wanted to be kept as late as possible to come in at Christmas for decorating purposes. The other half of the range is the late Peach house, the trees clean and healthy, and had just been cleared of a good crop. This range is unheated, and in favourable seasons good crops are procured of it; but Mr. Dunn considers it a serious mistake to go to the expense of building such houses and leaving them unheated, the crop being liable to be ruined by one cold night, which a crown's worth of firing would have saved, besides the uncertainty of ripening the wood in such dull sunless seasons as 1872 and 1873 without artificial heat. It is a clear case of "sinking the ship for the want of a pennyworth of tar."

We now enter the range of fruiting Pine stoves, 200 feet long and 12 feet wide, in three divisions. The first division is filled with Queens, which were maturing their growth preparatory to being started in January to give a supply in June and July. The next division is also filled with Queens in a slightly more advanced stage for fruiting in May. The last and largest division is filled with fine healthy plants. Some were just showing, some in flower, and some swelling-off, so that the supply through the winter would be unbroken. The principal sorts grown are Smooth Cayenne, very good and large fruit; Charlotte Rothschild, the best and heaviest generally; and Black Jamaica. This is found to be a sure setter and unequalled in flavour as a winter Pine, growing, however, too much crown in proportion of fruit. Montserrat is often grown as the Jamaica, but is in all good points inferior to that variety. Enville is also represented by large useful fruit, but is not considered of first-rate flavour. Prince Albert is another very handsome fine-sized fruit of good flavour, but liable to go black in the heart in winter. Black Prince, Providence, Moscow Queen, Thoresby Queen, and Otaheite are all found here, but none are considered worth growing in quantity except the four first named—that is, Common Queen, Smooth Cayenne, Charlotte Rothschild, and Black Jamaica.

Having now examined most of the glass structures of this great garden, there remain yet the flower and kitchen gardens, which may be briefly noticed in a future issue.—J. Wright.

NOTES on VILLA and SUBURBAN GARDENING.

Raising Seedlings.—It is now time to make a move with regard to sowing many sorts of seeds to raise plants for the embellishment of the flower garden during the coming season, and as most of the seeds are small it may be an advantage to make a few remarks on the manner of raising them. This is the more necessary, because I take it to be a fact that an amateur has not at all times a sufficient space to raise plants for the sake of experiment, but only just sufficient convenience to raise those he really requires. As most of the plants in request are of a tender nature, the seed at this early season will need the assistance of a little heat. It will be necessary in the first place to put up a gentle hothed, and place a frame upon it, and half fill the frame inside with the heating material; after the heat has subsided, which will only take a few days, cover the whole with a thin coating of ashes, yet not so thick as to prevent the heat from penetrating through it. This will bring the pots close to the glass or nearly so, which is a very great advantage to young seedlings, as it prevents them from drawing up weakly. Such a bed will suit the most tender things, as German Ten-week Stocks, Lobelias, Cockscombs, Cannas, Balsams, Asters, Tagetes and other Marigolds, Phlox Drummondii, Petunias, Larkspurs, Portulacas, Nasturtiums of the dwarf sorts, Mignonette; also the following choice things—Chamæpeuce Casabonæ and Diacantha, a Thistle-like plant of great ornament for an amateur's garden and Gaillardia picta, an old-fashioned plant neglected, but yet a beautiful and useful plant, with a large flower, crimson centre and yellow edge, very showy. Then there is Spherogyne speciosa, which is easily raised from seed; this is a yellowish flower with violet centre, and a capital border plant.

Now those who cannot afford a frame for all or any of these may raise the most tender of them in the warmest part of their greenhouse or vinery, and for the remainder make up a bed of heating material under a south wall, and place 3 or 4 inches of good open soil thereon; sow the seed, and cover at nights and cold days with mats spread over a frame of hoops. If the soil is not kept too wet the plants will not be long in coming up.

In sowing the seeds named above, an excellent rule to observe is to cover the seeds to the depth of their own size or thickness. This will be understood when I say that it would be quite wrong to cover the small seed of a Portulaca or Petunia to the same thickness as a Canna or those of a Ricinus or Castor-oil plant, which are the size of a Mazagan Bean. This is not all: the smaller the seed the finer should the soil be, so that its particles may press closer to it, and retain the moisture so necessary for its germination and after-growth.

Again, the application of water to seedlings raised in this way must have much attention. Some will require it much oftener than others, for two reasons—according to the depth they are placed in the soil; and the state of the atmosphere, whether dry or otherwise, in which they are expected to germinate. A small seed but just under the soil will need the surface frequently but gently moistened, while others of a greater depth may have water more freely, yet will not require it so often. In all cases, however, be careful not to saturate the soil and bring it to a sour state.

Let me now remind the amateur that before raising plants he should form a true estimate of his convenience for them, and not attempt the raising of too many at a time, because most of these plants which flower the same season require to be grown well and without check; also, to be thoroughly enjoyed they ought to have their growth well developed by taking every care for their progress before flowering. To secure this it is necessary that the seedlings be pricked out either in pots, boxes, or any other convenience as soon as they can be conveniently handled,

otherwise they draw up together, and their roots become entangled, so that they are not easily separated without great injury resulting. Clean vessels and fresh soil must be used, and the plants must be again placed near the glass, and at all times have air admitted according to the weather and the character of their growth and habits. At this time of the year, when every place is crammed to excess, all sorts of temporary contrivances have to be adapted for the welfare of the plants, and trouble in this respect is never thrown away.

Another important class of plants must not be omitted from the list of seeds to be sown now, and that is the climbers for trellis-work and covering bare walls, or making groups of flowers in suitable places in the open ground, also for suspending from vases, &c. These are the tall-growing Nasturtiums, Sweet Peas, Convolvulus major, Calempelis scabra, or as some call it, Eccremocarpus scabra, Lophospermum spectabile and scandens, as well as the common Canary Creeper. All the above are fast growers, and if they are wanted to cover a large space they ought to be grown to a good size before planting out.

It will be necessary to say there must be a regular process of hardening-off as their growth and the weather permit, for none of the things named above ought to be kept in heat beyond a certain stage of their growth, and some will require moving to cooler quarters. Others, such as Balsams, will be best kept growing in a milder temperature till they flower. — THOMAS RECORD.

DOINGS OF THE LAST AND PRESENT WEEKS.

HARDY FRUIT GARDEN.

"WHEN the wind is in the east it's neither good for man nor beast," is an old saying, and unlike a good many old couplets it is true; nor would its truthfulness have been questioned if the whole of the members of the vegetable kingdom had been included in the adage. Not only are our hardy fruit trees affected by it, but in the forcing houses its influence is also felt. At the present time the blossom buds on Apricot, Pear, and Cherry trees are very prominent, but none of the incipient buds have as yet burst through the scaly protecting covering in which they are enveloped, and it is well for the trees, as the east winds accompanied by frosts that would cut off any exposed blossoms. On Friday morning the thermometer exposed on the lawn registered 10° of frost; on other nights the temperature fell below the freezing point. At present nothing can be done either with trees on the open borders or on walls. Nailing, except a few small Morello Cherry trees, has been finished, the borders dressed with manure and dug.

The nailing of Morello Cherry trees on north walls is usually left until the last. As the fruit is all borne on the young wood of last year, it is well to lay it in rather thickly. Of course the largest proportion of young wood is formed at the extremity of the branches, and unless the trees are well managed the centre becomes thinly clothed with bearing wood. All growths near the centre should be encouraged to grow by careful training. Instead of nailing the young wood near the naked branches close down to the wall, they will do better if tied with strips of matting or fine tar twine to the stems; when the trees are in leaf they will in this way hide the naked stems. The Morello Cherry does not do well in any soil; the trees delight in a medium clayey loam, but in damp stiff loam or light sandy soils the branches canker, and some of them die-off early. If trees are in this plight it is necessary to unnail the whole tree and to nail it again regularly over the space to be occupied. Perhaps no more profitable fruit trees can be planted on walls facing north than these, but in some gardens if all such walls were planted with them there would be too many.

Red Currants succeed as well on a north wall as anywhere. They come in after those planted on a warmer station are over, and it is very easy to net the trees to keep birds from carrying off the fruit. Gooseberry trees are also quite as much at home on a north wall as the others; and a dish of Gooseberries is always esteemed, especially when the main crops are forgotten. In Scotland some of the late varieties, such as Warrington and Hedgehog, can be preserved on the trees in good condition down to October.

The best way to train both Currant and Gooseberry bushes on walls is to nail a branch horizontally right and left from the main stem, training up from these (vertically) the branches that will furnish the wall with bearing wood. These should be about 6 inches apart, and even if the walls are high there is no difficulty in furnishing the branches with fruitful spurs their entire length.

If the protecting material for walls is not already fixed in its place no time should be lost in attending to it. Correspondents are sometimes asking how the trees ought to be protected. The question is not always What is the best way? but, How can it be done the most cheaply? First, there ought to be a projecting coping about a foot over the wall; this may be of wood, which is perhaps the cheapest, then some stout poles, such as are used in the Hop-growing districts to train the Hop plants to should be obtained. These are sunk in the ground about 2 or 3 feet from the base of the wall, the upper end of the pole resting against the wall coping. The poles must be about 12 feet apart, these will prevent the material from being dashed against the trees. The simplest way is merely to nail the canvas to the coping and also at the bottom of the poles. When it is not required over the trees it can be rolled up and tied at the top with a small piece of strong twine.

FRUIT AND FORCING HOUSES.

Vineries.—In the earliest house the Grapes have set well and have been thinned. If the Vines require it the border should have a good watering, as the formation of young rootlets has previously taken place. A good supply of manure water will cause the berries to swell to a large size. The Muscats are now in flower, and they seem to be setting pretty well. The dull cold weather may be thought injurious at such a critical period, but as a rule Grapes set better in dull weather than they do with continuous sunny days, but a few blinks of sunshine are certainly beneficial to raise the temperature a few degrees. On sunny days with a high temperature in the vineries, when a bunch in flower is shaken the pollen may be dispersed in clouds, but it is not so efficacious as the smaller quantity which would be distributed in dull weather, or better still with just occasional glimpses of sun.

Many Grape-growers also stipulate for a very dry atmosphere at the flowering period, but a mistake may be made in this which will not be easily remedied. The atmosphere may become overdry if no water is sprinkled on the paths or borders. The result of this will be that the juices of the leaves will be dried up, the growth checked, and the whole plant be predisposed to the attacks of red spider. We water the outside borders of the early houses about three or four times during the season; each time the fermenting material is turned over a little fresh stable manure is added to raise the waning temperature. The young growths ought not to be stopped when the Vines are in flower, especially Muscats.

CUCUMBER AND MELON HOUSES.

Except attending to thinning-out and tying the growing shoots of Cucumber plants to the trellis, little more attention has been required. A very large proportion of male flowers were produced on some plants which had been raised from seeds; these were picked off, as they tend to exhaust the plants. Red spider appeared on some of the plants. There is no remedy except knocking them off with water applied from the syringe. This has been done on fine mornings, applying the water with some force to the under sides of the leaves; but as these are very easily damaged some caution is necessary.

The young plants of Melons had been growing on a shelf near the glass in small pots, and were very healthy, having made short-jointed stout growths. The border had been previously prepared for them by the soil being placed in the house a few weeks previously to become warmed. The temperature of the house is from 60° to 65°. As the plants were put out in rather moist soil, no water was applied to them at the time of planting. They will be watered after having made some growth.

GREENHOUSE AND CONSERVATORY.

These are now more attractive than they are at any other season of the year. Besides the usual forced flowers, such as Roses, Deutzias, Azaleas, &c., Hyacinths and other bulbous-rooted plants are also in full beauty. It is also worth noting here that some Hyacinths flower much stronger if the plants are kept in a warm house until the flowers are almost open the whole length of the spike, and amongst them are some of the best of the new sorts, such as King of the Blues, single; and Koh-i-noor, double red. Ida, the best yellow Hyacinth, opens best in heat; and Lord Byron, a fine porcelain blue flower, if it is not opened in heat the flowers at the top of the spike sometimes do not open at all, and a symmetrical spike is impossible. We pay attention to tying the spikes to sticks about the time the first flowers open. If this is not attended to in time the spikes fall over and sometimes snap at the base.

Amaryllis of sorts have also a brilliant and decided effect. A succession of them are kept up by placing the bulbs in heat, and just before the flowers open place them in the greenhouse, as, if the flowers are allowed to fully expand in heat, they do not last very long.

Chrysanthemums. — The cuttings had been put in, two or three in small pots, and as they were put in a hotbed they rooted freely; the plants have now been potted-off into 4 and 5-inch pots and have been placed in cold frames.

Picked withered flowers from Heaths, Epacris, &c. This should always be seen to as soon as the flowers fade, as not only are they unsightly but are also injurious to the plants.

FLOWER GARDEN.

We continue to pot-off Zonal Pelargoniums as opportunity offers. Those intended for the principal beds and borders were done some time ago, and are now well established in pots. Some are planted out in boxes, but bedding Pelargoniums do not plant out so well from boxes as most other bedding plants; the mould falls from the roots and the plants suffer. The best way is to pot the plants in 5-inch pots, and to see that they have

plenty of room. One bushy sturdy plant that has had sufficient space to develope itself is worth three or four that have been overcrowded; the latter do not start into growth until the summer is nearly gone, and they also suffer much during the process of hardening-off. It is difficult to give details of work amongst bedding plants at this season, as there is continual work moving the plants from warm to cooler houses, and from heated structures to frames or turf pits. All subtropical plants must be kept growing in a little heat until a change occurs in the weather.—J. Douglas.

TO CORRESPONDENTS.

Books (*G. A. B.*).—We have no such work. At one large establishment we saw lists printed on a slip of paper, and the cook marked the articles needed. Any printer would print a thousand of such lists for a few shillings. (*C. L. T.*).—Dr. Hooker's "Synopsis of Ferns" has no illustrations; Mr. Lowe's has coloured figures. Any bookseller could obtain either. We do not know the prices.

Cost of Digging (*A Subscriber*).—Digging light garden soil one spit deep, 1½*d.* or 2*d.* per rod. If the soil be heavy, 3*d.*

Prince's Briar Roses (*J. P.*).—They are fully noticed in our No. 703. Your wall Cherry trees need root-action. Give them a good soaking with weak liquid manure, and keep mulch over the roots.

Preserving Garden Nets (*A Constant Reader*).—Have them soaked thoroughly in a tanner's pit of oak-bark liquor, and when not in use keep them in a very dry place.

Cattleya citrina (*A Subscriber*).—It will succeed in a cool house in the temperature you name, which we presume is from fire heat. It should have a higher temperature when growing—60° to 65° at night, and 75° to 85° or 90°, the latter with sun, and should have more moisture, being sprinkled with water two or three times a-day, and this continued until the growth is perfected, when the block should be kept more dry, a light sprinkling once a-day, or not that in dull weather, being the whole of the plant's requirements during the season of rest. It succeeds the best of slight shade from powerful sun. It ought not at this season to be kept wet, but only damp, until the growth is considerably advanced, and then increase the supply of moisture with the growth.

Propagating Sphædogyne latifolia (*Idem*).—Your plant will not succeed in the temperature you name, it is too low, and to this is to be attributed the falling of the leaves and the rotting at the collar. The point of the shoots may be made into cuttings of two joints with the growing point to each, the leaves removed from the two lower, and insert to the next pair of leaves singly in pots well drained, and in a compost of sandy peat, turfy loam, leaf soil, and silver sand in equal parts. Place in a bottom heat of 75° to 80°, and keep rather close, moderately moist, and shaded from bright sun until rooted, when they should be shifted into larger pots, and have a moist atmosphere without syringing overhead. In potting from the cutting pots omit half the quantity of sand named for the cuttings.

Pruning Orange Trees (*Conservatory*).—The plants, having become straggling, ought at once to have the straggling growths cut back or removed, and if the heads are very thick of wood they should be thinned. This should be done with judgment, so as to produce evenly-balanced heads. Too much pruning, however, would only encourage growth and induce overcrowding, which will make the growths weak and liable to go off. No precise instruction can be given, but the above will give the needful idea of what should be aimed at in pruning Orange trees.

Ferns and Plants for Drawing-room (*Manor Hill*).—We have found the following plants very suitable and easily cultivated. Ferns are very useful, but it is necessary that the growths be completed and hardened-off before placing in such a position, or the fronds from the drier atmosphere of a drawing room are liable to suffer. Ferns are—Adiantums assimile, Capillus-Veneris, æthiopicum, cuneatum, formosum, setulosum; Asplenium bulbiferum, caudatum, dimorphum, and præmorsum; Blechnum occidentale, Davallia dissecta, D. tenuifolia, Doodia aspera, Goniophlebium appendiculatum, Gymnogramma ochracea, G. tartarea, Lastrea decomposita, L. decurrens, L. elegans, Lomaria gibba, L. Herminieri, L. Patersoni, Nephrolepis davallioides, N. exaltata, Platycerium alcicorne, Platyloma rotundifolia, Pteris cretica albo-lineata, P. longifolia, P. serrulata, P. serrulata cristata, P. umbrosa. Those require stove or greenhouse temperature. Hardy Ferns are even more suitable, of which we name a few which succeed admirably grown in a cool greenhouse:—Asplenium adiantum nigrum, A. marinum, A. trichomanes, Athyrium Filix-fœmina, vars. Applebyanum, apuæforme, corymbiferum, and plumosum, Blechnum spicant, and var. imbricatum, Lastrea dilatata cristata, L. Filix-mas, var. cristatue; Osmunda gracilis, O. regalis cristata, Polypodium dryopteris, P. vulgare, P. vulgare cambricum, Polystichum aculeatum, P. angulare cristatum, P. multifidum, Scolopendrium vulgare, vars. corymbiferum, crispum maximum, ramo-cristatum; and Lycopode, which do well in a stove with moisture, as Selaginellas erythropus, formosa, Lyalli, Martensi variegata; and in greenhouse, S. Wildenovi and denticulata. Stove plants—Alocasia Jenningsi, Anthurium Scherzerianum, Aralia leptophylla, Croton Johannis, C. angustifolium, C. Weismanni, Cyperus alternifolius fol. variegata, Dracæna Cooperi, D. reginæ, D. stricta, D. utilis, D. rubra, D. terminalis, Jacaranda mimosæfolia, Maranta zebrina, Musænda frondosa, Pandanus graminifolius, Panicum variegatum, Paullinia thalictrifolia, and Pilea muscosa. Isolepis gracilis is very useful, and such common things as the fine-foliaged Begonias. The above list will be more than you will need, but from it you may select what you require, and it may be useful to others of our readers.

Geranium Leaves Browned (*T. Best*).—The leaves are evidently injured by cold and damp. The plants should have a light position, and be near the glass without touching it; about a foot from it is proper. Then we think you water them overhead, as also the Fuchsias, which during the winter ought not to have more water than sufficient to keep them fresh. The temperature ought not to fall lower than 40° at night, and it need not be more than 45° by night or day from fire heat. Water more carefully, keeping the soil moist, and increasing the supply as the weather improves and the plants increase in growth, but it will all be of no use if you do not exclude frost.

Pump for Raising Water (*Anglicana*).—Your plan is not a good one, and we do not think 53 yards too long a distance to draw water by hand-power. We should have an ordinary iron 4-inch barrel pump at A instead of B, as any ordinary pump will raise water 15 feet. This will allow of a clear fall of 3 feet from A to B, the pipe being taken above ground with that amount of fall by the delivery pipe to the reservoir B. A 2-inch delivery pipe you would have instead of 2-inch suction pipe, and it would be not only cheaper, as a more economical pump would answer, but be very much easier to work. The pump could be raised upon a platform at A.

Cucumbers in Peach House (*M. J.*).—Very different indeed is the treatment required by the two. The Peaches require considerably more air—in fact, they could not in summer have too much, and the Cucumbers to succeed in a greenhouse require to be kept closer, more moist, and warmer than is good for Peaches.

Vallota purpurea (*A Lady*).—It will succeed as a window plant, and is one of the best. All that it requires is a window with a south aspect, and to be potted at this season if it require it, as it should now be making fresh growth. It should be liberally supplied with water up to July, after which it will suffice if the soil be kept moist. The leaves will require to be sponged occasionally to free them of dust. After June it may be stood outdoors in an open warm exposure, well watered or kept from flagging, removing to the window in early autumn.

Knight's Monarch Pear (*C. R.*).—It is usual for this Pear in a hot and dry season to become hard and never become tender in flesh. It is not suitable for a hot and dry position, but is one of the finest-flavoured kinds when grown on a west aspect. The fruit now hard will not ripen, especially as they have shrivelled, which would indicate imperfect ripening and too dry an atmosphere in the store room. See remarks on shrivelling in another column.

Crocuses Eaten (*Idem*).—Mice are the most likely cause of the injury of which you complain; a few would be sufficient to commit the damage, field mice existing often in greater numbers than is supposed. Squirrels we do not think would take them, and they do not suck rooks' or partridge eggs any more than the goatsucker sucks goats or the hedgehog cows; all are popular absurdities.

Propagating Roses by Cuttings (*Agricola*).—Spring cuttings may be had from forced plants which have just shed their flowers. These cuttings may be made with three joints cut transversely below the lowest, and the lowest leaf removed, then insert singly in 2-inch pots, using a compost of turfy loam, sandy peat, and silver sand in equal parts; insert the cuttings about 1 or 1½ inch deep. The pots should be plunged in cocoa-nut fibre refuse, sawdust, or other material over a gentle hotbed (70° to 75°), and kept close, sprinkling very lightly every morning with water the same temperature as that of the bed, and the cuttings to be shaded from sun. In about a fortnight they will have rooted, but they are not to be removed from the frame until shoots are made of 1 or 2 inches in length, and then they may be removed to a frame also with gentle heat, or be kept in the same, but having a little air daily to harden them. In about three or four weeks after insertion they will be fit to shift into larger pots, and may be placed in a cold frame, and be kept moist, rather close, and shaded from bright sun for a few days, when they should be hardened-off, and planted-out in May, or shifted into larger pots, and grown-on outdoors, the pots being plunged in ashes. Summer cuttings may be taken in July just after the flowers are shed, inserted in pots, and struck either in bottom heat as above described, or in a cold frame kept close, and sprinkled every morning. They will root less quickly than in a hotbed, but quite as surely. Autumn cuttings may be of any spare shoots in September or early October under a north wall, putting-in firmly, and in the following April they will be ready for potting.

Constructing Greenhouse (*Ashfield*).—It is not desirable to have Peach trees against the back wall of greenhouses, they are seldom satisfactory; but you may retain them if you are prepared to give them a low temperature in winter, which is essential for rest. We should remove them, and have instead a few Vines for the roof of one or both houses, which will give you better return than Peaches against the back wall. You can have the house in two divisions, one of 10 feet for a warm house, and the other 17 feet for a cooler house. The appearance would be best not to project beyond the house wall, the width therefore will be 10 feet. The front wall we should have 2 feet 6 inches high from the floor line, and to clear the door from drawing room you will need 4 feet 6 inches of front lights, and the height at back 11 feet 6 inches, or just beneath the coping of the wall. The front wall we should have built on piers, and arched over just level with the ground line, and this will allow of your having the Vines planted inside the house, the spaces between the pillars allowing of the roots passing outside. The glass most suitable is 21-oz sheet, thirds quality, and in squares of about 15 inches (not more) wide, and 2 feet to 2½ feet long. Heat by hot water, having a stokehole in the tool house, and take the pipes from the boiler across the end of the warm house to the front of the house, and then branch to the right with two pipes, and two returns for the warm house beneath the stage, and to the left with one flow and return for the cooler house, the pipes in both houses being beneath the front shelf, and about 18 inches from the front wall. You will need a valve upon the flow pipe of both houses just where they leave the main, so that you can regulate the heat at will in both houses. The flow and return across the end of warm house will do for both houses. The path the width of doorway, 2 feet 6 inches, so that you will have a shelf in front of 2 feet 6 inches in width, and that height from the floor, and a back stage of 5 feet; two shelves of a foot and one of 3 feet in width, each being raised a foot, the first on a level with the front one. These may be made of laths about 1½ inch thick and 1½ inch wide, with an inch space between each. Almost any boiler will heat the houses, so that you will not have to get up in the night, the fire being made up at ten o'clock; you may have one that will not require attention for several hours. The pipes should not be less than 3 inches, and are better 4 inches, which is the best size of piping. The piping must go the whole length of each house.

Greenhouse for Amateur (*Ignoramus*).—If you have a wall already up and with a suitable aspect the most economical form of house is a lean-to, and it answers very well as a greenhouse; but if you have no wall the best form is a span, as it admits light equally all around. The best mode of heating each a house would be a stove boiler, and 2 or 3-inch hot-water pipes. The stove may be within the house, having a pipe or funnel to take the smoke and injurious products of combustion clear of the house. We cannot recommend one dealer preferably to another. It is matter for your own choice.

Heating Cucumber House and Greenhouse (*T. Haslam*).—To grow Cucumbers and Melons successfully you will require pipes for bottom as well as top heat. Two pipes will be necessary for bottom heat to a bed of 4 to 5-feet width, the pipes being surrounded by and covered with rubble about 9 inches thick, and over this the soil a foot thick. You will therefore require the additional pipes for bottom heat to the Cucumber house, which will make

a difference of about £2. One pipe along two sides and one end will be quite ample to heat the greenhouse, though with two pipes you can regulate the heat by valves, and if you at any time wish it you could with the two pipes along both sides command a stove temperature. If you have a bed on both sides of the Cucumber house you will need hot-water pipes for each, and the expense would be double. The pipes for top heat ought to be over the bed or upon the walls of the beds.

Insects in Vinery (*Somerset*).—We failed to find anything in the soil, where you could hardly have thrips or red spider. The other insect in the piece of paper appears the remains of a smashed thrip, which may be destroyed by fumigation with tobacco, but be careful not to apply it too powerfully or the Vines may be scorched. It would have been better to have sent us a leaf or two of the Vines, for upon those the insects live, and if there is no evidence of them on the leaves you have no cause to be alarmed.

Seakale with Long Stems (*Idem*).—If your plants are not very old and the stems thick you may cut them over level with the ground as the heads are cut for use, and new crowns will be formed sufficiently strong for forcing another season. If, however, the stems are very thick, it is likely some of them may rot, especially if the weather be wet for some time after cutting; but we think the stems may with safety be cut back, as they have been drawn by the ashes.

Irish Fern (*Gloucester*).—It is one of our rarest native Ferns, Trichomanes brevisetum.

Crickets (*Idem*).—Chass's beetle and cricket poison can be obtained of any chemist.

Van Thol Tulips not Flowering (*G. S. R.*).—The cause, we think, is that the bulbs were not ripened well. All the Vermilions failing confirms our opinion. They were probably grown by a different florist than those with different coloured flowers, which all produced blooms.

Fruit for N.E. Wall (*S. S.*).—Morello Cherry; Adams's Pearmain and Stormer Pippin Apples; Brown Beurré and Winter Nelis Pears; Purple Gage and Peach Plums.

Deodorising Catgut Manufactory Sewage (*Werp*).—Try mixing half a hundredweight of sulphate of lime (plaster of Paris) with each hundred gallons.

Maranta (*E. D.*).—There were no insects in the soil or roots. They were probably the white Acari that often swarm on decayed roots, and decayed were the roots of your Maranta, probably from being kept too cold and too wet. The fleshy-leaved plant is the Aloe perfoliata, the Succotrine or Bitter Aloe. It requires a high temperature and dry air to induce its flowering. There is a portrait of the flowers in the "Botanical Magazine."

Insects on Willow Twigs (——).—The small yellow grubs boring in the young twigs of Willows are the larvæ of a little midge (Cecidomyia salicina), which are sometimes very injurious to the Willows used by basketmakers.—I. O. W.

Name of Conifer (*G. B.*).—It is, we think, Cryptomeria elegans, but the colour is pale for the species, which may be due to its growing in a sheltered position. Ours are of a bright chocolate colour.

Names of Plants (*John*).—No. 2 is Sweet-scented Coltsfoot. The other three specimens, being only leaves, we cannot name. (*G. A.*).—Helichrysum speciosissimum.

POULTRY, BEE, AND PIGEON CHRONICLE.

JUDGES.

Now, when there is a cessation of poultry exhibitions, and committees are consulting over their schedules for fresh shows, it seems to be a good time to say a few words on the judges.

We have watched and seen with pleasure how many societies have advertised who their judges are to be, for this is a very important announcement. However good a schedule may be, however much trouble a committee may take over their show, unless the judges are up to their work, and men that the poultry fancy have faith in, come to grief that exhibition must. Shows are now excessively numerous. Every town—nay, many mere villages—have an open poultry show, and exhibitors consequently can pick and choose where to send to. We have heard of shows got up solely for the "benefit" of some few; but such shows live a short life and collapse, for in these days exhibitors will have justice.

It is a well-known fact that those shows which do advertise who their judges are to be have the most entries. We noticed this most especially in December last. In one week alone some fourteen or fifteen exhibitions were held, and, without one exception, those that advertised their judges had the most entries, and those who did not had only one or two entries in some classes. The locality had nothing to do with it, for birds were sent to those places where the owners knew who would judge them irrespective of distance.

We feel it must be apparent to all promoters of shows that the judges should be known beforehand, for on that must depend more or less the number of their entries. Some committees may think that exhibitors, knowing who are to judge their birds, might try and make some arrangement with the judges. To such committees we say that a man who can be "arranged with" would soon be found out, and could no longer hold his position. Such a state of things would soon come to light.

But even to those who do advertise who their judges are to be we would say a word. Most shows have two judges—that is, most shows of any size; to those who only have one we say nothing. Let them go on advertising who that one is to be; but we think most assuredly that those who have two or more judges should in their advertisement which states who those are, state also what classes each is to judge. Take two judges, say A and B. A may be a well-known skilful adjudicator, while B may be a bad hand at the work; but the entries are made in consequence of A's name being advertised, while B may have to award the prizes in some classes he knows little about. Or A may be more especially at home in some classes, and B in others. The committee, however, not knowing this, may make out their judging books quite differently, and so again the awards would not be made by that man who the exhibitors at entering expected would make them, for all the exhibitors know the right man for the right work. We frequently see advertised in the Pigeon department—"Mr. C will take the Pouters and Carriers, and Mr. B the remainder." Well, so let it be in poultry. Let exhibitors know who will take the various classes in future at those shows which have more than one judge. We are sure it would pay, and the committee could easily arrange the matter when they correspond with and engage their judges.

Judges are few, and how very grateful exhibitors should be to those gentlemen who week after week go long journeys to out-of-the-way places to officiate. More judges are wanted, all will agree in thinking, and, what is more, more judges must be had. But we often pause to consider whether exhibitors go the right way to obtain them. Unfortunately men capable for the work do not abound. If a new hand does venture to make a trial every mistake he makes is made ten times more of in and out of print than if it had been made by a well-known hand. We must remember Rome was not built in a day, and a man must have practice before he can become a Teebay or a Hewitt. We have had two or three fresh hands this year, and they have done well, and we hope to see them in the like office again, and be as distinguished for their honesty in their awards as their power of picking out the best birds. Then, again, we are always glad to see a large staff of judges. We believe the awards would give more satisfaction if the judges had a practicable amount of work allotted to them. No man can satisfactorily make awards when he knows that he must hurry through the work to get it over by a given time.—W.

NORTHAMPTON SHOW OF POULTRY, &c.

We always look upon this Show as the Lenten one: it comes in mid-Lent, when other shows are over and the birds are all at home resting thankfully after many victories or doing penance for defeat. In the midst of this gloomy season Mr. Humphreys issues his schedule and prepares the great hall in the Corn Exchange for his poultry tournament, which comes like a feast day in the Lenten-tide. Just the very good and best birds which have won many prizes and generally acquitted themselves well are sent to Northampton for the gala day. The catalogue is numbered up to 1390, but we gather from a note at the "finis" that the total number of entries at this capital Show was 1514, taking which number from the former we may reckon that close on 130 entries were made and received late. We do not approve of this plan. It is not fair to those who enter early, and in this matter Oxford may set an example, who, in one year in particular, sent back close on two hundred entries to keep faith with exhibitors. We notice here at Northampton one lady's numbers were all A's and B's right through, and we were sorry to learn that her manager made a mistake in the day, and so was *hors de combat*.

Before commencing to criticise we must say one word on the excellency of the catalogues—well got up, and awards printed against the names. We wish all committees where it is possible would follow suit and print the awards in the catalogue. We were sorry to find some mistake had arisen with Mr. Turner about the Pigeon pens, and they were consequently not erected in time for Mr. Tegetmeier to finish his awards by daylight, which must account, we suppose, for a few alterations we should like to have made in the Pigeon awards. He had to judge alone, too, for Mr. Gresham did not arrive till he had finished his labours, which were very considerable. Many extra prizes were awarded, and we were glad to see it; but this Show could afford to be liberal from the great patronage it received.

Dorkings were all grouped together. The non-division of Dorkings and absence of Polish classes were the blots on the schedule, and we shall hope to see it remedied next year. Dorkings were as a whole disappointing. The winners were good, but nothing out of the common. The first and second hens were fine deep hens. 14 (Cheesman), also good. 11 (Lord Massy), a splendid hen, and cheap at catalogue price of 30*s*.

Cochins we called a good lot. They had six classes. Buffs were capital. The first cock good all round. Third we preferred to second, he was better in colour. 29 (Winwood), good, and so was 31 (Feast). In Buff hens, if the first-prize hen were honestly shown, and we almost think she was, she was a bargain at £5 5*s*., being a first-class bird. 48 (Leno) was, we believe, the cup hen at Oakham. She looks well. 43 (Sherwood), a capital pullet. In Black or Partridge cocks, the first was an old friend looking well. 55 (Whitworth), a nice Black. In hens, first, second, and third went to Blacks, and all good birds.

White cocks were ten in number. The first was a coarse bird, but soon claimed at £4 4s. The second and third were two fine cocks of spotless colour and good shape. White hens were good. The first-prize hen the same bird as we noticed at Kendal; second good; third poor. We preferred either of Mr. Woodgate's two highly commended hens infinitely. 86 (Feast), good.

In *Brahmas*, Lights came before the Darks. All the winners were well placed, the second running first close. In hens the first was a beauty; the second down behind, we fear. She has been a grand one. Third very pretty. 130a (Dean), a good bird. 110 (Boissier), a very grand hen. Dark Brahmas did not like being classed behind their Light brethren perhaps, for they did not muster so strongly. We liked the second cock immensely, but he was very heavily feathered. Third a good bird. In hens the winning Dark was an old friend looking as well as ever. Her colour is not good, but she is splendid in size and fluff. The second was a well-marked hen, but bad in colour also. We have missed Mr. Lingwood's name of late in Dark Brahmas, and are sorry to learn, from a letter from him recently, that he is laid-up and has been for some time with one of those bad throats which have been so prevalent.

Malays were good. The third in cocks went to a new exhibitor, we fancy. We rejoice as much as Mr. Hinton does to see fresh names in the "abused" weeds. Malay hens were good too, especially the winners.

French mustered very well. Houdans are quite rivalling the Brahmas in popularity. The winning cocks were good, but we liked 177 (Dring) as well as any one of them, but his comb we conclude was objected to. The winning hens were capital, the first, if we mistake not, the grand hen that was passed over at Dorchester. 190 (Boissier), a capital hen. In French of any other variety good Crêves were first and second, and a capital La Flèche third. 208 (Dring), a grand cock of fine shape. In hens Crêves won all the prizes. The winners were good. In looking over the French classes it would seem to us as if the wrong heads had got on the wrong bodies, so many Crêves having Houdan combs, and *vice versâ*.

Spanish were wonderfully good. They made as two good classes as we have seen this season. The first cockerel was a beauty. 240 (Whitworth), good. Hens were a splendid lot, and all the birds well shown.

Game had six classes, and surely Mr. Matthews must almost have surpassed himself. He won the six firsts with his six pens. "That is the way to do the trick," as the portly man said who had got near twenty pens at the Show and only won a hatful of useless "highly commendeds." We will say all his winners were absolutely perfect, and so speak of all the firsts once and for all this time. 267 (Fitz-Herbert), a capital Black Red cockerel. Good, too, was this gentleman's hen which won second, and only in at 42s. The third Brown Red cock was a little too deep in colour, or else of grand shape. 322 (Whitworth), disqualified for pulled hackles. We wish "Elijah" had left him at home. The second and third Duckwing hens were very nice. We liked the latter especially.

Hamburghs were a good lot, well judged and mostly well shown. The Gold-spangles very good, the first cock being perfection, as, too, was the first hen. What a grand pair they would make! Gold-pencilled were very fine. We are not sure, though, that we did not prefer Mr. Beldon's third to his second cock. Then hens which won seemed well placed, the first hen especially well marked. In Silver-spangles all the winners were good and well chosen, and Silver-pencils made two of the best classes we have seen of the breed for a long time. The first was superb in tail—quite a Goitstock model. 424 (Long), a nice cock. 431 (Norton), a very good bird. The markings of all the prize hens were very good. 439 (Feast), a very pretty bird. Black Hamburghs also mustered well, and the quality was really first-class. The first pullet was a beauty to all appearance, and a bargain to someone at 30s.

The two Variety classes were very large and wonderfully good. In cocks Poles won all the prizes. Gold, Silver and Gold, and all good. 473 (Norwood), the best White-crested Black Poland cockerel we have seen for many a long day, and we should have liked it to have had an extra prize. 474, a nice Silver Poland cock. In hens, Golden Poles were first and second, and a miserable Cuckoo Cochin third, and extra third a nice Sultan. 486, a nice Minorca. 495 (Beldon), a very beautiful Silver Poland hen.

The Sale classes were large, and the prizes seemed judiciously distributed. Many of the birds changed hands.

The *Ducks* did not make large classes. The first Ayleaburys were only 60s., and the third 30s., and both from Aylesbury. Rouens were good, and we were glad to see new names in the list. In Variety Duck class Mandarins were first and second and Carolinas third, all nice specimens. Writing of Fancy Ducks, we are sorry to have to record the death of the cup Japanese Teal drake at Bristol. It was one of the very few specimens of the breed in England, and we had hoped they would have got more general, being such a charming little breed for ornamental waters.

Game *Bantams* were very good, Black Reds the best; Mr. Hall winning first in both classes. In variety Game Bantam cocks Duckwings were first, second, and third; and in hens Piles first and third, with a Duckwing between them. Black and White Bantams made two fair classes, the first-prize cockerel being very lustrous and good. In Variety Bantams Mr. Leno walked his Laced in without much opposition, Silvers, Gold, and Silvers winning in the order named.

The Pigeons were very good. The White Pouters were nicely shown and well selected. 778 (Baker), a very nice cock. In the next Pouter classes were some good Blues and Blacks; the first Blue cock especially struck our fancy. In Pouters Any other colour, Reds won all the prizes, but they were not an Al lot. Old Carriers were disappointing. Mr. Yardley's winners were, however, good. In Carriers hatched last year we preferred Col. Hassard's two cocks to either second or third-prize birds. The hens seemed well placed. Barbs were good; a nice old Yellow first. Third, a good Black, which we preferred to second. Short-faced Tumblers were a charming lot; the second-prize Almond a sweet little bird. In Variety class of Tumblers were one or two good clean-cut Balds. A very pretty silver Muff won an extra second. Foreign and English Owls were two large classes. A lovely White was first in the Foreign class, and a good Blue in the English, while a truly exquisite Silver was second, and third again a nice Blue. Turbits were also splendid, but we did not much care for the judging. We thought 927 (Jones) should have been higher. In the next Turbit class the winners were good, but Mr. Cresswell's Shell-crested Black which won third was not nearly so good as his unnoticed pen 938, which we thought should have been at least second. Dragoons made two very large classes, and the quality was admirable. How popular they do seem! Jacobins were good. 990 (Nottage), a good Red. Fantails were lovely, Whites winning all the prizes. 1026 (Yardley), a fine Blue. 1027 (Cresswell), a wonderfully good young White. 1031 (Loversidge), a nice White. Antwerps were numerous, and Mr. Tegetmeier seemed at home among them. Nuns a large class. We thought they would have observed the season too closely to have come out so strongly. Magpies wonderfully good, and the whole lot were commended. In the Variety class a neat Red Swallow was first, in at 40s.; third a good Trumpeter. 1129, a cheap Archangel (Wingfield), for 35s. 1131, a good Blue Swallow. An interesting local class finished-off this department.

We can only congratulate this hard-working Committee on their general success, and the admirable selection of days, avoiding the objectionable plan of the Show being held over a Sunday. We give full awards below.

Dorkings.—*Cock.*—1, H. Feast, Swansea. 2, S. W. Hallam, Whitwick. 3, W Roe, jun., Newark. *hc*, T. Potter, jun., Trowell. *c*, J. Hedges. *Hen.*—1, W. H. Crabtree, Levenshulme. 2, W. Roe, jun. 3, H. Feast. *hc*, Lord Massy, Daventry; R. Cheesman, Westwell; S. Brierley, Ending.

Cochin-China.—*Cinnamon or Buff.—Cock.*—1, G. H. Procter, Durham. 2, Mrs. E. Allsopp, Worcester. 3, W. A. Burnell, Southwell. *hc*, D. Young, Lesmington; Mrs. Bentley, Teddington; C. Taylor; E. Winwood, Worcester; H. Feast; H. Piper, Oxford; Mrs Nicholson, Machon Bank. *Hen.*—1, H. Robinson, Sheffield. 2, T. Sherwood, Crowfield. 3, G. F. Umpleby, Boroughbridge. *hc*, R. Fowler, Birmingham; T. Sherwood; Mrs. E. Allsopp; M. Leno, Markyate Street, Dunstable; T. H. Turner, Sheffield.

Cochin-China.—*Partridge or Black.—Cock.*—1, W. H. Crabtree. 2, F. C. Bentinck, Cambridge. 3, J. Franklyn, Terrington, King's Lynn. *hc*, W. Whitworth, jun; F. C. Bentinck; W. & T. Holt. *c*, Hon. & Rev. C. T. Vernon. *Hen.*—1 and 2, W. & T. Holt, Accrington. 3, W. Whitworth, jun., Longsight, Manchester. *hc*, H. Feast.

Cochin-China.—*White.—Cock.*—1, J. H. Nichols. 2 and 3, R. S. S. Woodgate, Pembury, Tunbridge Wells *Hen.*—1, G. H. Procter. 2 and 3, Rev. A. Warde, Little Horsted Rectory, Uckfield. *hc*, H Feast; R. S. S. Woodgate (2).

Brahma Pootra.—*Light.—Cock.*—1, P. Haines, Palgrave. 2, W. H. Crabtree. 3, R. E. Horsfall, Liverpool. Extra 3, Mrs. Peet, Sharnbrook. *hc*, S. Lucas, Hitchin; J. H. Butler, Birmingham; W. T. Bromley, Daventry; E. Scammell, Trowbridge. *c*, E. Mannooch, Pinner. *Hen.*—1, Mrs Peet 2, W. H. Crabtree, Extra 2 and 3, P. Haines. *hc*, R. A. Boissier; S. Lucas; R. Bird, Fulham; J. H. Butler; T. A. Dean, Marsden, Hereford.

Brahma Pootra.—*Dark.—Cock.*—1, Rev. G. W. Joyce, Tavistock. 2, J. F. Smith, Sheffield. 3, W. H. Crabtree. *hc*, Miss Jacques, Richmond; A. Bamford, Middleton; C. Taylor; H. Robinson. *Hen.*—1, W. H. Crabtree. 2, J. W. Peake. 3, J. F. Smith. *hc*, W. Prentice, jun., Thrapstone; T. Stretch, Ormskirk. *c*, J. S. Clarke, Ounsdle.

Malays.—*Cock.*—1, R. Hawkins, Sunderland. 2, G Burnell. 3, Lady D. Yeoman, Whitby. *Hen.*—1, R. Hawkins. 2, G. Burnell. 3, J. Richardson, Longbborough.

Houdans.—*Cock.*—1, W. Whitworth, jun. 2, Mrs. Vallance, Sittingbourne. 3, J. L. Hawkins. *hc*, R. A. Boissier, Penshurst; W. Dring, Faversham; Miss Jacques; S. W. Thomas, Sketby (2). *Hen.*—1, Mrs. Vallance. 2, S. W. Thomas. 3, W. Whitworth, jun. *hc*, R. A. Boissier; W. Dring; A. Ogden, Ashton-under-Lyne; H. Feast.

French.—*Any other variety.—Cock.*—1, W. H. Crabtree. 2 and *c*, C. H. Smith, Parkfields, Derby. 3, Rev. N. J. Ridley, Newbury. *hc*, W. Dring; W. Cutlack, jun., Littleport; E. Clarabut, Peterborough; Mrs. Cross, Brigg. *Hen.*—1, W. Cutlack, jun. 2, W. H. Crabtree. 3, H. Beldon, Goitstock. *hc*, Mrs. M. Wicks, Appleby, Brigg; Rev. T. C. Beasley, Dallington; E. Brown, Sheffield; J. H. Nichols.

Spanish.—*Cock.*—1, D. M. Mills, Newport Pagnell. 2, H. Beldon. 3, Mrs. E. Allsopp. *hc*, W. Cropley, Stratford; W. Whitworth, jun.; H. Goddard, London; Mrs E. Allsopp. *Hen.*—1 and 2, Mrs E. Allsopp. 3, E. Brown. *vhc*, J. Pitt, Wolverhampton. *hc*, J. T. Parker, Northampton; C. W. Brierley, Middleton; H. Beldon. *c*, W. G. Henry, Dublin.

Game.—*Black-breasted Red.—Cock.*—1, S. Matthew, Stowmarket. 2, J. Mason, Worcester. 3, R. H. Tyte, Minchinhampton. *hc*, G. H. Fitz-Herbert, Sevenoaks; H. Butler, Heanor; A. C. Swain, Radclive. *Hen.*—1, S. Matthew. 2, G. H. Fitz-Herbert. 3, R. J. Pratt, Charlbury. *vhc*, J. Mason. *c*, R. H. Tyte; H. Feast

Game.—*Brown-breasted Red.—Cock.*—1, S. Matthew. 2, H. E. Martin, Fakenham. 3, J. Cook, Worcester. *hc*, G. F. Ward, Wrenbury; C. W. Brierley. *Hen.*—1, S. Matthew. 2, J. Cock. 3, G. F. Ward. *hc*, A. Peake, Oakham; C. W. Brierley; J. Richardson. *c*, F. Glanville, St. Austell.

Game.—*Any other colour.—Cock.*—1, S. Matthew. 2, J. Mason. 3, E. Winwood. *hc*, G. F. Ward; E. Bell, Burton-on-Trent; C. W. Brierley. *Hen.*—1, S.

Matthew. 2, T. Whittaker, Melton Mowbray. 3, E. Winwood. *hc*, B. Mollett, Balham.

HAMBURGHS.—*Golden-spangled —Cock.*—1, Duke of Sutherland, Stoke-on-Trent. 2, H. Pickles, Earby, Skipton. 3, H. Beldon. *hc*, T. Blakeman, Wolverhampton; J. Long, Bromley Common. *c*, S. W. Evans, Sutton Coldfield; D. Simons; T. Love, Northampton. *Hen.*—1, H. Beldon. 2, S. W. Hallam. 3, Mrs. T. Blakeman. *hc*, H. Pickles; T. Love.

HAMBURGHS.—*Golden-pencilled.—Cock.*—1, H. Pickles 2 and 3, H. Beldon. *hc*, W. Speakman, Nantwich; T. Dixon, Selkirk. *c*, T. Wild, jun. *Hen.*—1, C. Judson, Southwark Street, London. 2, W. Clayton, Keighley. 3, H. Beldon. Extra 3, W. E. Snell, Barrodes. *hc*, W. Speakman; H. Beldon; W. Linton, Selkirk; Duke of Sutherland.

HAMBURGHS.—*Silver-spangled.—Cock.*—1, H. Beldon. 2, Duke of Sutherland, 3, H. Pickles. *hc*, J. Carr, Swansea; J. Long; H. Beldon. *Hen.*—1, H. Pickles. 2 and *vhc*, H. Beldon. 3, W. T. Lindsey, Great Yarmouth.

HAMBURGHS.—*Silver-pencilled.—Cock.*—1, H. Beldon. 2, H. Pickles. 3, H. Feast. *hc*, J. Long; Duke of Sutherland; H. Beldoo; B. Nortoo, Town Malling. *c*, R. W. Bracewell, Skipton. *Hen.*—1, H. Pickles. 2, H. Beldon. 3, Duke of Sutherland. *vhc*, H. Feast. *hc*, J. Long; R. W. Bracewell; H. Beldon.

HAMBURGHS.—*Black.—Cock.*—1, H. Beldon. 2, H. Pickles. 3, Duke of Sutherland. Extra 3, H A Clarke, Aspatria. *hc*, T. A. Wright, Great Yarmouth; O. Thompson, Kettering; T. Bush, Bristol; J. Foster, Kettering. *c*, J. Long. *Hen.*—1, W. H. Shackleton, Bradford. 2, T. Bush. 3, H. Pickles. *hc*, J. Long; H. Beldon; Stott & Booth, Bury.

ANY OTHER VARIETY.—*Cock.*—1 and 2, H Beldon (Polaud). 3, A. & W. H. Silvester, Sheffield. *hc*, J. Croote, jun., Bridgewater (Minorca); T. Norwood, Salisbury (White-crested Black Poland); G Lias, Par Station (Silver Poland); Mrs. C. Gray, Northampton; Mrs. G. W. Boothby, Louth; J. Long; A. & W. H. Silvester; H. Feast.

ANY OTHER VARIETY.—*Hen.*—1, A. & W. H. Silvester. 2, G. W. Boothby (Golden Poland). 3, H. Feast; J. Watkin, Northampton (Cochin-China). *vhc*, H. Beldon (Poland) (2); J. J. Watkin (Cuckoo Cochin). *hc*, J. Croote, jun. (Minorca); Miss E. Vernon, Kettering (Golden Poland); T. C. Newbit (White-crested Black Poland).

SPECIAL SELLING CLASS.—*Any variety except Bantams and Ducks —Price not to exceed 30s.—Cocks.*—1, R. Fowler (Buff Cochin). 2, P. Ogilvie, Hambledon (Dark Brahma). 3, Lord Massy (Light Brahma). Extra 3, A. C. Swain (Black Red); S. Sambrooke, Chipping Campden. *vhc*, M. Leno (Brahma) *hc*, R. Cheesman (Coloured Dorking); W. A. Burnell (White Cochin); T. J. Harrison, Kendal (Buff Cochin); J. T. Parker (Spanish); P. Ogilvie (Buff Cochin); J. Holme, Kettering; T. A. Dean; H. Yardley, Birmingham.

SPECIAL SELLING CLASS.—*Any variety except Bantams and Ducks.—Price not to exceed 40s.—Hens.*—1, J. T. Parker (Spanish). 2, J. H. Nichols, Lostwithiel (White Cochin). 3, J. Holme. Extra 3, W. A Burnell (Buff Cochin); J. T. Parker (Spanish). *hc*, Lord Massy (Light Brahma); R. Cheesman (Colonred Dorking); Miss A. Binney, Wallingford (Light Brahma); J. Honey, St. Austell (Brown Red Game); T. Love (Golden-spangled Hamburgh); J. H. Butler (Brahma); E. G. Keay, Birmingham; R. Newbit; J. Pitt (Spanish); W. Roe, jun. (Dorking); H. Yardley; Mrs. E. Allsopp (Spanish); M. Leno (Brahma); J. Richardson (Duckwing); T. Hancock, Northampton; T. H. Turner; Mrs. Nicholson.

SPECIAL SELLING CLASS.—*Any variety except Bantams or Ducks —Price not to exceed 60s.*—1, H. Pickles. 2, M. Leno (Brahma). 3, W. F. Addie, Preston Extra 3, Rev. R. Fielding, Muggington Rectory, Derby (Partridge Cochin); R. Newbit. *hc*, R. Cheesman (Colonred Dorking); Mrs. Cross (Crève-Cœur); J. T. Parker (Spanish); E. G. Keay; W. Bentley, Holmfirth; J. Bassett, Lostwithiel (Spanish); J. Nelson, Hexham; Mrs. E. Allsopp (Buff Cochin); C. Bloodworth, Cheltenham (Buff Cochin); J. Holme; Furness & Sudall, Rawtenstall.

SPECIAL SELLING CLASS.—*Any variety of Duck.—Price not to exceed 30s.*—1, T. Kingsley (Aylesbury). 2 and 3, J. Hedges (Aylesbury). *hc*, J. Long (White Call).

SPECIAL SELLING CLASS.—*Any variety of Bantams.—Price not to exceed 30s.*—1, R. H. Ashton (Black). 2, Shumach & Daft. 3, R Wingfield. Extra 3, G. F. Ward. *hc*, T. E Thirtle, Lowestoft (White); R. Newbit; M. Leno (Laced). *c*, T. E. Thirtle (Black).

LOCAL CLASS.—1, W. Nottage, Northampton. 2, J. T. Parker (Spanish). 3, T. Wright, Northampton. *hc*, C. T. Higgins, Northampton.

DUCKS.—*Aylesbury.*—1, J. Rodwell, Msidsmorton. 2, T Kingsley, Tring. 3, J. Hedges, Aylesbury. *hc*, T. Kingsley; T. Plumb, Northampton.

DUCKS.—*Rouen.*—1, Lady G. Gordon, Peterborough. 2 and 3, Hon. Mrs. Vernon. *hc*, Mrs. Bayard, Gwernydd Berriew.

DUCKS.—*Any other variety.*—1, A. & W. H. Silvester. 2 and 3, M. Leno. *hc*, T. Walton, Northampton; E. W. Southwood, Fakenham.

GAME BANTAMS.—*Black-breasted Red.—Cock.*—1, G. Hall, Kendal. 2, J. Mayo, Gloucester. 3, S. Beighton, Southwell. Extra 3, Shumach & Daft, Southwell. *vhc*, W. Griffin, Ashby-de-la-Zouch. *hc*, T. W. Anus, Clapham; Capt. T. Wetherall, Kettering; T. Dawson, Epworth. *c*, A. Newton. *Hen* —1, G. Hall. 2, S. Beighton. 3, J. Calladine, Heanor. *hc*, Shumach & Daft; J Randall, juo.,

GAME BANTAMS.—*Brown-breasted Red.—Cock.*—1 and 2, T. Barker, Burnley. 3, G. Hall. *hc*, A. Cameron, Rotherham. *Hen.*—1 and 2, S. Beighton. 3, W. S. Marsh, Deal. *hc*, T. Barker; J. Mayo; G F. Ward. *c*, H. A. Clark.

GAME BANTAMS.—*Any other colour.—Cock.*—1, T. Dawson. 2, G. Hall. 3, Shumach & Daft. *hc*, T. Barker; G F. Ward; S. Beighton. *Hen.*—1 and 3, T. Barker. 2, Master A. Frew, Sinclairtowo, Kirkcaldy. *hc*, E. W. Southwood.

BANTAMS.—*Black or White.—Cock.*—1, H. Beldon. 2, Milner & Beanland. 3, R. H. Ashton, Mottram, Maochester. *hc*, W. H. Shackleton; J. Mayo; A. Smith, Halifax. *Hen.*—1, Milner & Beanland. 2, H. Beldon. 3, Wells and Sherwin, Ripon. *hc*, W. H. Shackleton; Wells & Sherwin; A. A. Vander Meersch, Tooting, London; A. Smith; J. H. Law, Birmingham.

BANTAMS.—*Any other variety.—Cock.*—1 and 2, M. Leno. 3, Miss B. B. Frew, Kirkcaldy. *Hen.*—1 and 2, M. Leno. 3, Miss R. C. Frew. *hc*, J. T. Hincks.

PIGEONS.

POUTERS.—*White.—Cock.*—1, Mrs. Ladd, Calne. 2, W. Nottage. 3, R. Ashton. *hc*, J. Baker, Kew Bridge. *c*, G Foster, Northampton. *Hen.*—1, Mrs. Ladd. 2, R Ashton. 3, J. Baker. *c*, W. Nottage.

POUTERS.—*Black or Blue.—Cock.*—1 and 3, W. Nottage. 2, J. Baker. *hc*, H. Yardley. *Hen.*—1, W. Nottage. 2, J. Hairsine, Hull. 3, J. Baker. *hc*, J. Baker; W. Nottage.

POUTERS.—*Any other colour.—Cock.*—1 and 3, W. Nottage. 2, J. Baker. *Hen.*—1, 2, and 3, W. Nottage.

CARRIERS.—*Cock.*—1, H. Yardley. 2 and 3, J. Baker. *c*, J. Stiles, jun., Kettering. *Hen* —1, H. Yardley. 2, J. Baker. 3 J Stanley, Blackburn.

CARRIERS.—*Young Cock.*—1, H. Cartwright, Edghaston. 2, J. Stanley. 3, J. Baker. *hc*, Col. F. C. Hassard, Sheerness (2); J Baker. *c*, W. Massey, Spalding. *Young Hen.*—1, J. Baker. 2, H. Cartwright. 3, J. Gardner, Preston. *hc*, C. E. Chavasse, Sutton Coldfield; H. Cartwright; J. Baker; J. Stanley; J. Walker, Burslem. *c*, Mrs. Ladd.

BARBS.—*Cock or Hen.*—1 and *c*, J. Baker. 3 and *vhc*, H. Yardley. 2, W. Massey.

TUMBLERS.—*Short-faced.—Cock or Hen.*—1, H. Yardley. 2, A. & W. H. Silvester. 3, J. Baker *hc*, A. & W. H. Silvester; J. Gardner. *c*, J. F. While, Birmingham; H. Yardley (2); W. R. Pratt, Oxford

TUMBLERS.—*Any other variety.—Cock or Hen.*—1, R. Woods, Mansfield. 2, W. Tedd, Birmingham. Extra 2, C. E. Chavasse. 3, R. Woods. *hc*, A. & W. H. Silvester (2); R. Woods; W. Tedd (2). *c*, J. Kendrick, jun., Redditch; J. Barker.

OWLS.—*Foreign.—Cock or Hen.*—1, 2, and 3, J. Baker. *hc*, T G. Sprnot, Boundary Road, London; S. Lawson, Preston; P. H. Jones, Fulham, London.

OWLS.—*English.—Cock or Hen.*—1, J. Gardner. 2, P. H. Jones. 3, S. Lawson. Extra 3, E. Lee, Nantwich. *hc* T. Sprnut; F. P. Bulley, Oxford; R. Shillitoe, Hitchin; H. W. Weaving; W. G. Henry; S. Lawson. *c*, F. Steel, Halifax.

TURBITS.—*Blue or Silver.—Cock or Hen.*—1, W. G. Henry. 2, E. A. Seale, Kilpohhin, Dublin. 3, J. Baker. *hc*, C. W. Washbourne, Gloucester; T. S. Stephenson, Beverley; T. Homes, Lower Sydenham; P. H. Jones.

TURBITS.—*Any other colour.—Cock or Hen.*—1, E. A. Seale. 2, T. S. Stephenson. 3, O. E. Cresswell, Early Wood, Bagshot. *hc*, C. A. Crafer, Wallington; A. & W. H. Silvester; E. A. Seale; J. Baker (2); W. Tedd. *c*, E. A. Seale; F. Steel.

DRAGOONS.—*Blue.—Cock or Hen.*—1, J. Baker. 2 and 3, R. Woods. *hc*, R. Woods (2); Powell & Crane, Oxford (2); W. Bolshaw, Northampton. *c*, R. Woods; H. Yardley.

DRAGOONS —*Any other colour.—Cock or Hen.*—1, J. Atkins. 2, J. Gardner. 3 and Extra 3, R. Woods. *hc*, Wells & Sherwin; J. Atkins, Bedford. *c*, A. McKenzie; S. Cliff, Nantwich.

JACOBINS.—*Red.—Cock or Hen.*—1, J. Baker. 2, T. Holt, Bradford. 3, E. North, Leeds. *hc*, W. Nottage; T. Holt; J. Gardner.

JACOBINS.—*Any other colour —Cock or Hen.*—1, T. Holt. 2, E. A. Seale. 3, S. Lawson *hc*, E. A. Seale; R. Woods.

FANTAILS.—*Cock or Hen.*—1 and 2, E. A. Seale. 3, J. Walker, Newark. *hc*, H. Yardley; O. E. Cresswell; J. F. Loversidge, Newark. *c*, O. E. Cresswell.

ANTWERPS.—*Short-faced —Cock or Hen.*—1, F. Woodhouse. 2, J. Gardner. 3, J. F. While *hc*, A. Carruthers, Luton; H. W. Weaving, Oxford; C. E. Chavasse; H. Yardley.

ANTWERPS.—*Long-faced or Homing.—Cock or Hen.*—1, Scragg & Valters, Oxford. 2, Miss Perrin, Northampton. 3, W. R. Pratt.

NUNS.—*Cock or Hen.*—1, E. A. Seale. 2 and 3, W. Brown, Northampton. *hc*, J. Baker; W. Tedd.

MAGPIES.—*Cock or Hen.*—1, W. Nottage. 2, H. W. Webb, Lower Sydenham. 3, P. H. Jones.

ANY OTHER VARIETY.—*Cock or Hen.*—1, H. Draycott, Leicester. 2, A. & W. H. Silvester. 3, A. A. Vander Meersch. Extra 3, W. Tedd. *hc*, A. & W. H. Silvester; H. W. Webb; H. Yardley; R. Wingfield; F. Steel (2). *c*, A. & W. H. Silvester.

SPECIAL SELLING CLASS.—*Cock or Hen —Price not to exceed 3's.*—1, J. Barker. 2, Mrs. Ladd 3, W. G. Henry. *hc*, H. Lionet, Northampton; F. P. Bulley; H. W. Weaving; Mrs. Ladd; A. Perry, Hardingstone; E. North; H. Yardley; W. Massey; W. Tedd. *c*, W. Nottage.

SPECIAL SELLING CLASS.—*Cock or Hen.—Price not to exceed £5* —1 and 3, H. Yardley. 2, W. Nottage. *hc*, Mrs. Ladd; E. North; J. Stiles, jun.; J. Baker. *c*, J. Currie, Worcester.

SPECIAL SELLING CLASS.—*Price not to exceed 40s.*—1, Mrs. Ladd. 2, W. Nottage. 3, H. Draycott. Extra 3, W. Massey. *hc*, C. H. Buckland, Reading; W. G. Henry; H. Draycott.

LOCAL CLASS.—*Any variety.—Cock or Hen.*—1, W. Nottage. 2, G. Foster. 3, W. Brown. *hc*, W. Nottage; C. Hillier. *c*, W. Nottage.

RABBITS.

LOP-EAR.—*Self-colour.—Buck or Doe.*—1, H. Kendrick, Walsall. 2, Dr. Boden, West Hartlepool. 3, F. & E. J. Fell, Blackburn.

LOP-EAR.—*Broken Colour.—Buck or Doe.*—1, J. Irving, Blackburn. 2, Dr. Bodeo. 3, F. Lovehand, North Street, London, N.W. *vhc*, J. Hodson, Northampton; B. Greaves, Cleethorpes; F. Lovehand. *hc*, T H. Jones.

ANGORA.—*Buck or Doe.*—1 and 3, H Swetman, Fulford. 2, T. Garner, Northampton. *vhc*, O. Thompson. *hc*, M. Kew, Market Overton.

HIMALAYAN.—*Buck or Doe.*—1, C. G. Mason, Rochdale. 2, F. Sabbage, Northampton. 3, J. Pickworth, Spalding. *vhc*, Dr. J. D. Eames, Great Driffield. *hc*, Dr. J. D. Eames; J. Garner. *c*, J. Milverston, Northampton; J. Hallas.

DUTCH.—*Buck or Doe.*—1, H. Sabbage. 2, B. Greaves. 3, T. Garner. *vhc*, H. E. Gilbert, Rugby; W. Donkin, Driffield. *c*, Mrs. H. Pickworth; A. Budson, Hull.

SILVER-GREYS.—*Buck or Doe.*—1, A. Hudson. 2, J. Firth, Bramley. Extra 2, Miss Mortimer, Rudhall, Ross. 3, J. Hallas. Extra 3, H. W. Wright, Shepherd's Bush, London. *vhc*, E. Ames, Ash Grove, London, E.; Miss Mortimer; E. Robinson, Kettering; T. Schofield, Manchester. *hc*, R. A. Boissier; W. Clappen, Cirencester; G. Farrar, Bedford. *c*, J. Pickworth; A. W. Whitehouse, Northampton.

ANY OTHER VARIETY.—*Buck or Doe.*—1, P. Ogilvie. 2, J E. Pilgrim, Hinckley. 3, Rev. T. C. Beaseley, Dallington. *vhc*, S. Ball, Bradford; T. H. Dows, Boston. *hc*, Mrs. H. Pickworth; J. T. Billet, jun., Richmond; G. C. Levett, Soham; J. Tebbutt, Northampton; J. Hallas; B Greaves. *c*, R. Bowes.

SPECIAL SELLING CLASS.—*Buck or Doe.—Lops excepted* —1, P. Ogilvie. 2, C. Bryant, Bedford. 3, G. Johnson, Kettering. *vhc*, M. A. Hudson; T. Garner. *hc*, D. Craike.

SPECIAL SELLING CLASS.—*Lop-ear.—Buck or Doe.*—1, H. Kendrick. 2, A. McKenzie. 3, F. Loveband. *hc*, G. Adams, Northampton; F. Loveband.

LOCAL CLASS.—*Buck or Doe.*—1, A. W. Whitehouse. 2, J. Tebbutt. 3 and *hc*, F. Sabbage.

CATS.

LONG HAIR.—*Male.*—1, H. N. Wetherall, Kettering. 2, W. Prentice, jun., Aldwinkle, Thrapstone. 3, Miss Pell, Northampton. *c*, W. Bradshaw, Northampton; B. Cox, Northampton. *Female.*—1, Miss M. Wetherall, Kettering. 2, — Faulkner, Northampton. 3, J. W. Howard, Northampton. *hc*, B. Cox. *c*, H. N. Wetherall.

TABBIES.—*Male or Female.*—1, F. Coles, Northampton. 2, F. Baxter, Bath Place, London. 3, J. J. Phipps, Earl's Barton. *hc*, C. F. Smith, Tabernacle Row, London; Mrs. Roberts, Spratton Vicarage, Northampton.

ANY OTHER VARIETY.—*Male or Female.*—1, F. Longland, Northampton. 2, Mrs. C. Gray. 3, Mrs. Slater, Northampton. Extra 3, F. Coles. *hc*, Mrs. H. L. Cocksedge, Bury St. Edmunds. *c*, S. Parberry, Kingsthorpe.

JUDGES.—*Poultry:* Mr. R. Teehay and Mr. J. Dixon. *Pigeons:* Mr. W. B. Tegetmeier and Mr. F. Gresham. *Rabbits:* Mr. E. Hutton. *Cats:* Mrs. A. Pell and Miss Beasley.

THE MEALY POUTER.

I HAVE seen in the columns of a contemporary Mr. Wallace's letter under the above heading. He starts with the conclusion that I am both questioner and answerer referred to in the "Letter Box" of this Journal. To make use of Mr. Wallace's own words, I give his conclusion the most "unqualified contradiction." I know neither one nor other, but in common with many others was very much amused at the pithy style of the reply. The letter referred to shows once more how a drowning man will catch at a straw, the complaint from beginning to end is, that I was never a member of the North British Columbarian. Neither Mr. Ure nor myself ever was or ever had anything to do with its affairs, but I was one of the originators of the Society of which the North British is only the remains—in fact, it is the change of name alone upon which Mr. Wallace builds his "unqualified contradiction." The original name of this Society was the "Scottish Ornithological;" after Mr. Ure and myself retired along with others the name of this Society was altered to the "North British;" therefore anyone can at once see how by forgetting the change of name the mistake has occurred.

As to the last paragraph of Mr. Wallace's letter, "Why was there not a class for this bird at Edinburgh?" There was a class there, though not a separate one (see catalogue) at that time. The editor of the contemporary I refer to must put in his word, right or wrong. However, his friend Mr. Wallace unfortunately lets out that a Mr. McLean was the means of the class for Mealies being in the Glasgow Show in 1866 and 1867, thus showing that the claim of the editor is quite absurd. Now has the matter come out! Years before these two Exhibitions did Mr. Ure and myself debate the question and had it settled; and yet the suggestion came from "ourselves," says the editor in question! Further, he charges me with false representations, and he goes on to lead his readers to believe that I have been excluded from the columns of his journal, which is simply not true.

I do not wish to occupy space needlessly, therefore just a few words and then I have done. Along with Mr. Ure I sent a letter to this new contemporary in reply to a letter which appeared there, but they were such as hurt the feelings of the editor, and were likely, he thought, to do the same to the feelings of his friends to whom we were replying. We were told unless our replies were altered to suit they could not be put in print. Our replies were, "No alteration; please return our manuscripts." We had them returned, and forthwith, along with several others, have excluded ourselves from his columns and have left him.

In concluding this, to me, rather painful letter, allow me to say that I have always advocated a position for the Mealy Pouter, and some of those now loud in its praise at one time opposed me; but experience in breeding by it will more and more assure fanciers of its sterling value. Now, some of our readers may forget and others wonder what was the origin of all this correspondence. Let them, then, satisfy themselves by referring to No. 666, January 1st, 1874, of this Journal.—James Huie.

[We have another letter sustaining Mr. Huié's statement, which we are obliged to omit until next week.—Eds.]

NEGLECT AT THE OXFORD SHOW.

I exhibited some Jacobins there, and they contrived to lose a very nice hen from my hamper by neglecting to tie the lid. I received a telegram from the Secretary stating the bird had escaped on its way to the station. I wrote back to say that I should expect compensation for the loss of the bird, and that I considered it worth £3, but I have not been favoured with any other communication on the subject. The hamper had four compartments, three were tied; the one was not tied from which the bird escaped.—Alfred Heath.

[The Committee ought at once to pay for the bird. If you sue in the County Court they would be compelled to do so and to pay all costs.—Eds.]

LIGURIAN BEES.

I am glad to see that Mr. Pettigrew has thrown out a challenge (if I may use the term), whereby the merits of the Ligurian and the English bees may be tested and compared, but at the same time I would suggest that the merits of the wood and straw hives may at the same time be put side by side.

I also think the idea a good one for both parent hive and swarm to be put to the test, and then take notes of the weight either in bulk or run honey, or any other way that may be decided upon, the supers to be taken as run honey.

Now, the difficulty will be, To where are the bees to be sent? It will never do for the bee-keeper in the south to send his bees to the north, or the reverse. I would suggest that several places should be fixed upon; for instance, Rowsley near Chatsworth, the seat of the Duke of Devonshire, would be a good place for the bee-keepers thirty miles around Rowsley, and it is easy of access from all parts. The midland county apiarians might fix their own place, also those of the south country theirs; but we in the north, near Manchester, must get away from the smoke to compete with Worcester or Devon.

I intend sending some of my bees to Rowsley this spring to try for a good glass super of pure honey, which I have never yet obtained to exceed 20 lbs. upon my nine-bar Woodbury hive, but think I can do so from my Pettigrew 18-inch straw hive.—South Lancashire Bee-keeper.

OUR LETTER BOX.

Aylesbury Ducks (*An Ignoramus*).—If you do not intend to show till the end of the year, Ducks hatched next month will be early enough. Oatmeal is an excellent thing to give them when young. Small pieces of raw meat are also good for them when a fortnight or three weeks old. They should not be much in the water. It is most essential that Aylesbury Ducks should have pale flesh-coloured bills, and for that reason they should not be allowed to use ponds of stagnant water; such is often dark-coloured, and has an effect on the colour of the bill. When the ducklings are six weeks or two months old they may have whole oats, ship biscuits, or any other food; but if you mean to exhibit you will do well to give occasional feeds of raw meat. It gives growth and makes weight.

Books (*F. Hart*).—Brent's "Canary and other Song Birds." You can have it free by post from our office if you enclose 1s. 7*d*. in postage stamps with your address.

Piping Bullfinch (*Dora*).—You may vary the food of your Bullfinch by occasionally adding hemp seed to the canary and rape seed; not too much hemp, for instances are known of blindness and a change of plumage having been brought about when too freely fed upon hemp seed. Now and then give Bully some crushed plain biscuit, and watercress and small salad. The green food will tend to cleanse its stomach. Millet and grass seeds and a little piece of apple may likewise be given. Rape seed, prepared by being soaked a whole night in water, then the water strained off, and the seed partly dried by being rubbed in a cloth or towel, is a good diet for Bullfinches when they appear dull; and it would suit "Dora's" bird when in its melancholic fit. As to the quantity of food a Bullfinch should eat in one day, is a matter we cannot attempt to regulate. Much depends upon the appetite. Some birds waste more than they eat. Wastefulness is often caused through a want of discretion in too freely supplying the seed drawer or fountain with food, much of which is found mixed with the dirt or sand on the bottom of the cage. Were we to suggest the idea of only a certain portion of food being supplied some half-dozen times during each day, we are fearful we should be entailing too much trouble upon "Dora," and after all Master Bully would not eat much less daily than his 1½ oz. We do not consider the bird to be a glutton. Bullfinches in their wild and natural life seek for their food when they require it, and our advice is, Let the bird have its daily supply, with access to it at any time during the day when the appetite requires appeasing. Do not pamper the bird with delicacies such as pastry or sugar (we have no cause for supposing you do), and let it have a supply of grit-sand on the cage-bottom. Probably the bird has been kept too warm, and its system brought into a poor state through artificial heat. This may be the cause of its ruffled feathers. Let Bully have access occasionally to a good-sized cage, and if the bird will take a cold bath now and then so much the better. Cleanliness, exercise, pure water, and fresh air will do more for its health than the physician. Bullfinches are very fond of most kinds of berries and buds of trees. Examine the crevices and haunts of your Bullfinch's habitation, and see that there are no tormentors lurking about until the bird retires to roost—we will not say rest, for there is no rest when so plagued. Possibly this may be another cause of your bird appearing dull. Our Bullfinch is full of vigour, bright in the eyes, and close in feather. It has never been in artificial heat, and feeds daily upon hemp, rape, canary, millet, flax, groats, and broken biscuit, the same as our three sprightly Goldfinches. One cannot make themselves too familiar with a piping Bullfinch, for a chatty tongue will much speedier gain the good graces of Bully.

Feeding Stocks (*W. E. M.*).—The weather has been very trying for weak hives, many of which will have perished during the last three weeks' cold. We would advise you to watch carefully the operations of your bees in the different hives as soon as the weather becomes warm again. If you find pollen-gathering going on with tolerable vigour we should say, Let them alone, but continue to stimulate them with a little food given continuously. If the weak hives you speak of are not likely to maintain a separate existence, then you might join the survivors to one of the other stocks. Sometimes, however, the weak hives of one year become the strong hives of next year. We hardly think your weak hive lost life owing to your feeding, but we cannot speak positively, not knowing the full circumstances.

Belgian Hare Rabbit Eating Her Young (*G. A. R.*). — We do not think age has anything to do with the unnatural trick. It is the result of fever and internal derangement. The safeguard is always to keep a doe, especially when near kindling, liberally supplied with green food, and if with water so much the better. In rabbits, as in many other animals, no mistake is so fatal as high feeding for a time before parturition. We do not believe this would have happened had she had access to water and been well supplied with green food.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

| Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date.	9 A.M.					In the Day.				Rain.
1875. March.	Barometer at 32° and Sea Level.	Hygrometer. Dry.	Hygrometer. Wet.	Direction of Wind.	Temp. of Soil at 1 foot.	Shade Temperature. Max.	Shade Temperature. Min.	Radiation Temperature. In sun.	Radiation Temperature. On grass	
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 3	29 851	34.6	33 3	N.	33.9	38 5	31.4	45.3	31 4	—
Th. 4	29 993	34.3	33.5	N.	35.0	42.2	29 9	63 3	28 1	—
Fri. 5	30.002	32 8	31.7	N.E.	35.3	44 8	27.1	70 6	25.4	0.670
Sat. 6	29.772	41.6	40.2	S.S E.	35 5	49.5	31.8	59.1	29.2	0.142
Sun. 7	29 872	53 0	51.9	S.W.	37.2	58.6	49 5	88 8	38.6	0.284
Mo. 8	30 029	51 6	51 9	S.W.	41.6	57 8	49 8	64.9	48.1	—
Tu. 9	29.860	52.4	47.8	W.	43.1	55.2	49.7	102.1	46.8	—
Means	29 911	42.9	41.3		37.4	49.5	37.2	69.7	35 8	0.505

REMARKS.

3rd.—A dull grey day, but beautiful starlit night.

4th.—Rather misty in early morning, but very bright for two or three hours in the middle of the day, frosty and bright at night.

5th.—White frost in the morning, followed by a most beautifully bright day throughout. [day.

6th.—Rainy and dark, a few gleams of sunshine, but as a whole a dull damp

7th.—Fine morning; very bright about noon; but rain commenced about 3 P.M., and continued at intervals all day.

8th.—Very fine rain and very warm; fair from 1 P.M., when it was very bright; wind very high all night.

9th.—Rainy and windy in the early morning; but very bright before 10 A.M., and so continued; wind going down soon after noon.

The northerly winds gave way on Saturday the 6th, and the temperature rose rapidly, even the soil 1 foot deep rising nearly 10° during the week. The effect upon vegetation has been very marked.—G. J. Symons.

COVENT GARDEN MARKET.—March 10.

The supply has somewhat improved during the last few days, and that is the only alteration worth notice. The latest cargo of St. Michael's Pines was scarcely so good as those previously received, and the rates generally were lower. The ordinary Oranges from thence have been very unsatisfactory this season. Some samples of Tangerines, however, are very good.

WEEKLY CALENDAR.

Day of Month	Day of Week.	MARCH 18—24, 1875.	Average Temperature near London.			Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
18	Th	Royal Society 8.30 P.M. Linnean Society 8 P.M.	49.9	33.0	41.5	9 af 6	7 af 6	0af 2	22 5	11	8 10	77
19	F	Royal Institution at 8 P.M.	50.9	33.0	41.9	7 6	9 6	20 3	40 5	12	7 54	78
20	S		51.1	33.8	42.5	5 6	10 6	36 4	54 5	13	7 36	79
21	Sun	Palm Sunday.	50.7	32.5	41.6	2 6	12 6	50 5	5 6	●	7 18	80
22	M	Geographical Society at 8.30 P.M.	50.4	34.3	42.3	0 6	14 6	2 7	15 6	15	7 0	81
23	Tu	Royal Medical and Chirurgical Society at 8.30 P.M.	50.7	33.1	41.9	58 5	16 6	14 8	25 6	16	6 42	82
24	W	Glasgow Horticultural Society, Spring Exhibition.	48.7	31.7	40.2	56 5	17 6	26 9	35 6	17	6 23	83

From observations taken near London during forty-three years, the average day temperature of the week is 50.3°; and its night temperature 33.5°.

HARDY ANNUALS FOR ANY GARDEN.

THESE flowers afford delight to many by their graceful forms, quiet yet varied colours, and their simplicity of culture. They are specially adapted to the many who possess neither greenhouse nor frames, and whose circumstances preclude them making large purchases for their gardens of popular bedding plants. The owners of small unpretending gardens who have to plan and contrive to make this part gay, that bright, and the other sweet, often derive more actual enjoyment from their home plots than do those whose larger enclosures have the superintendence of professional care, the owners of which know nothing of the pleasure of preparing.

It is indeed true that there is more pleasure in working than the indolent dream of—more enjoyment in making our own homes attractive by our own hands than those trained in luxury can be made to understand. This is especially so in regard to gardening and the cultivation of flowers.

Look at the rosarian. He may have at his command sufficient assistance to produce the blooms ready for enjoyment; but that would not be enjoyment to him—he must have a share in the producing, or his choicest flowers will be deprived of a measure of their beauty, and be robbed of a portion of their delightful breath. No; he must himself labour to make his enjoyment full—he must be up with the sun of summer, pick out the worm from the buds, and sweep the green fly from the trusses, and then, when the perfect blooms unfold their beauty, is true enjoyment felt. But it is not even then complete. He must first call his friends to rejoice with him, or cut a dainty flower to cheer some cherished relative or imprisoned invalid before he can feel a fuller magnitude of the pleasures his garden gives. Or he must—as he has often done—hasten breakfastless away to some murky town and spread his work before the multitude, and if the fame of a "first prize" is awarded to his products then is the triumph complete; but if he fails, what disappointment! No; if the true lover of flowers sees others have flowers better than his own he will rejoice in their success, and buckle on his armour more firmly, will be up earlier and work harder, and the more persistent his application the greater his daily pleasure, and the more pleasant his dreams of hope and of future success.

The wife of a clergyman has written these lines—"I am an invalid, and my means are limited, but my simple garden is my solace; it is small—to you insignificant—but is a paradise on earth to me: tell me of some simple flowers that will grow at my bidding, and which will, with such trifling care as I am able to bestow with my own hands, make my home-walks pleasant."

That was a charming, a pathetic appeal from a delicate lady to a sunburnt son of toil. That lady enjoys her little garden with as great a relish as that bestowed on his by any noble in the land.

"Simple flowers," "come at my bidding," "grow with my own hands," "small garden," "limited means." What could be done under those conditions than to recommend hardy annuals? They were suggested, tried, and answered. Are there others in some degree similarly circumstanced? Possibly, and we pity them for nothing but their failing health. To these, therefore, the same advice may be given, and in the same way; thus—

Annuals are the flowers for you; but if your garden is overshadowed with trees, if the soil is poor and shallow and has not been well and deeply dug and manure added, or cannot be made good by digging at once, do not grow them. If when you receive this advice you keep it in hand and seek that of others, and defer to procure seed until late in April or in May, do not sow then. If you cannot find time when the plants are above ground to dress them round with lime and soot, or guano or sharp sand, to prevent the snails from devouring them, do not waste money in purchasing seed; and if you cannot find in your heart to thin-out the plants where too thick, you will not do justice to the plants or credit to my judgment, and therefore you had better let annuals alone.

As to the first condition, annuals will not flourish under trees or in poor shallow soil: it must be deep, good, and the site open. As to the second, if sowing is deferred until the weather becomes hot the plants cannot take firm and deep hold of the soil to procure the moisture they need, and their flowers are in consequence poor and their beauty transient. As to the third, if they are left to sustain unaided the attacks of slugs and snails very few will survive, and the molluscs will assuredly be the victors; and as to the fourth condition, if the plants are not thinned sufficiently or in time, we have no right to expect a vigorous and prolonged bloom any more than we should reckon that Turnips, Cabbages, or any other crop could attain perfection if left to struggle to maturity in the dense thick seed bed.

Now, bearing in mind these cardinal yet oft-neglected points of culture, we advise first of all to sow during the first fine weather of March Mignonette freely. Most gardens are too scarce of this sweet old plant. If sown early in good soil, and the plants eventually thinned to 5 or 6 inches apart, and it be cut freely and have the bulk of the seed pods clipped off, it will continue fresh all through the summer. The seed is best sown in shallow drills. Next, where a floral hedge is desired to act as a dividing line between one part of the garden and another, sow as soon as possible Sweet Peas. For this purpose they have no equal, and for cut bloom they are indispensable. They are frequently sown a month too late, and do what small garden Peas do under the same conditions—produce weak rows, small flowers, and poor crops. If in May a term of hot weather is foreseen, or whether it is or not, a row of tall Nasturtium seeds may be planted 3 inches apart at the foot of the row, and they will produce plants to run up the sticks, and form a hedge over the Peas and commence blooming just when the Pea flowers fail in July. These Nasturtiums will continue until the frost.

But perhaps a dividing row of lower growth may be preferred, and this may be provided by Larkspurs. A mixed row of the dwarf varieties has an effect all its own, and, if not of long duration, it is worth space for its attractive beauty during the month of July. A row of the branching varieties is taller and less dense, but will continue in bloom much longer than the former—indeed, if the seed spikes are clipped off, which is nice employment for a lady, the plants will grow and flower throughout the season. Early sowing and deep good ground are essentials of success, while late sowing and poor soil will lead to certain disappointment. Sow the seed in drills precisely as Onion seed is sown, and expect a reward.

Now for a few bed and border annuals. It must be conceded that if masses of bloom are required from June to October very few annuals will give them; but, what is sometimes forgotten, neither will all the bedding plants, as they are not established until July. But even for filling beds, a few annuals can be found which possess lasting qualities and a decision of colour which bedding plants cannot surpass.

Do you ask for a scarlet annual suitable for a bed which in colour is equal to a Geranium and nearly or quite as lasting, and we name Nasturtium Tom Thumb Scarlet; and one of which the flowers are more brilliant still by contrast with the bluish-green foliage, is King of Tom Thumbs. The seed should be sown to 2 to 3 inches deep about the middle or towards the end of March. Snails or slugs will not eat Nasturtiums, which is a great advantage. Severe spring frost will sometimes injure them, but if sown deeply the young plants will be safe by not appearing above ground until the weather is genial.

The scarlet being duly provided, what shall we have for a bed of rich blue? For this Convolvulus minor is named, selecting for the variety C. tricolor splendens. That is surpassingly rich in colour when had true, and makes a glorious bed, which will continue in beauty until destroyed by frost—that is, having deep soil and soakings—not sprinklings—of water if needed. It is beautiful for cut bloom, and the flowers last well in water. This is also a plant which slugs will not eat or a few degrees of frost injure. Sow the seed fully an inch deep, and thin-out the plants by degrees to a foot apart. As a long list of names commonly perplexes and bewilders more than benefits those requiring only a few distinct flowers, the aim is to be concise in selection; but we may name one other blue annual for bedding as adapted to wet localities, and that is the lovely Nemophila insignis. Where the summer rainfall is heavy there is no better bedding plant than this well-known annual. It is a rainy-season plant *par excellence*, and the deluge of 1872 in the wettest localities in Britain proved its worth. In hot seasons and dry localities it is short-lived, but in rainy districts it will grow and bloom for five or six months—a fact perhaps not generally known.

Passing on to a pink bedding annual, Saponaria calabrica has no rival. This plant possesses every quality of a good bedding plant—viz., dense habit, distinct colour, and continuous and free-flowering properties. With good soil-preparation and reasonable cultural attention this simple flower makes a perfect and charming bed.

We must now look for a white bed, which is not so easy to find amongst the hardy annuals. White-flowering annuals are to be found in plenty, but as a rule they are not lasting. The white variety of the foregoing and the old Sweet Alyssum, A. maritimum, are amongst the most suitable, and with high culture will last nearly all through the season. Clarkia and Candytuft may be, perhaps, more telling, but they are also more transient.

Of yellow bedding annuals there is no lack. The best are the Yellow Tom Thumb Nasturtium and Sanvitalia procumbens; there is a double variety of Sanvitalia, but the seed is much less certain to germinate freely than the single form, and for a bed the latter is recommended. A yellow annual with bolder flowers, also lasting if thinned and proper attention given, is the old Eschscholtzia.

The above are the principal colours which are required for bedding, but a crimson may be required. Linum grandiflorum makes a glowing bed, and is more lasting when the seed is sown in the bed at the end of March than when it is sown, as is frequently the case, on a prepared bed, and the seedlings are transplanted. To that is added the old Malope grandiflora. Seed of this sown in rich soil in March, the plants duly thinned out and eventually pegged down, culminates in a mass of extreme richness.

We have now found annuals suitable for bedding comprising white, scarlet, blue, pink, yellow, and crimson. They are all hardy, or may be treated as such, and are of free and easy growth. As to their lasting qualities this depends on the cultivator carrying out the hints of guidance above narrated. Annuals for mixed borders are set aside by the exigencies of space. Half-hardy annuals, as Stocks, Asters, &c., can all be grown admirably by the "glassless amateur," especially if seed is not sown until something more is heard from—A Surrey Gardener.

THE ROSE GARDEN IN WINTER.

"There's never anything about Roses now," I sighed this morning as with eager fingers I cut open the pages of our Journal. "I wonder why no one says a word about them week after week?" "Well, dear, you should write something yourself," said the lady who usually stands expectant at my elbow as the welcome pages are hastily run through in search of articles of interest, and inquires, "Anything in the Journal to-day?" The lady's "anything" has reference chiefly to Roses and fowls.

I remember that when first I began to ride my two hobby-horses I had great difficulty in inducing a certain person who shall be nameless to mount behind me. But now—— Well, I'm not quite sure that I haven't to ride behind myself! On one of the hobbies, at all events, my proper place appears to be the seat nearest the tail. How times do change! But how happy am I even in that position compared with those the comfort of whose ride is being continually spoiled by feminine attempts to drag them from the saddle. However, being mounted and incited (from behind on this occasion) to "go 'long," let us see where our "Rosinante" will carry us.

First of all let us congratulate ourselves and all growers of Roses on the glorious weather we are having at present. For nearly fourteen days frost and snow, and hail and sleet, easters and north-easters, with occasionally the pure breath of the northern king, have been doing their best to keep our too bumptious pets in their proper places. There is a proper time for everything, as the wise man remarks; and certainly with Roses there's a time to grow and a time to refrain from growing. Having had their early ardour quenched, let us hope that this season they will choose the latter better and more appropriate part for the next six weeks to come. Our prospects here are good; for though the too warm February sun in the early part of the month coaxed out a few little tender leaves on the points of the shoots, the latter half of the month has effectually compensated for this mistaken indulgence. Oh, north-east wind! I love you in February and March, but I dread you in May.

Certainly the rosery affords one great pleasure even in winter. How nice it is to walk round and "take stock"—to count over this row of Marie Baumann, to reckon up that line of Madame Rothschild! How often in imagination one clothes the leafless plants with glorious summer foliage and still more glorious flowers! How tenderly one bends over that puny representative of a new, and possibly a famous, name in time to come! Here is the batch of dwarfs on Manetti transplanted last November put-in in capital time, just before the heavy rain set in. How comfortable they look, carefully staked and liberally mulched. Observe, too, that the wood, which shrivelled slightly at first, is now fresh and plump to the very tips. Walk down the rows, how well they have moved! There is not a dead or sickly one among them. Now we come to the batch of dwarfs on seedling Briar stocks, strangers from Oxford; and well indeed they look, everyone apparently a man (or Rose) of might, ready to do, but I hope not to die.

Here are the standards: these have not been moved this season, and consequently look a little leafy at the end of the shoots, but nothing to hurt. Boreas has put that all to rights for us. Dr. Andry, Charles Lefebvre, Abel Grand, Alfred Colomb, La France—oh! as I read your names what visions rise before me! But now we will have a look at the stocks budded last summer.

The Briars, I grieve to say, did not take well, and display several blanks in the rows. The weather was very scorching when the buds were put in, and the ground dry. Seedling Briars better than I expected, but still not quite even. The buds remain quite dormant as yet. Dwarfs on Manetti a good take, hardly a bud failed. But—and there is a "but"—look down the rows, how many of the buds have begun already to shoo! Well, one cannot have everything. It is a good stock, easy to propagate, easy to bud, easy to cultivate when budded,

for it throws up hardly any suckers, but it certainly is a trifle too excitable.

Now for the Teas. Maréchal Niel, you are as usual too forward. Here is one climbing over the warm side of a poultry house covered with bloom buds already. Nice havoc there would have been had it not been sheltered with a few yards of unbleached calico. As it is there is no damage done, and we may look for some early blooms. Four or five plants of the same variety against a wooden fence facing south-east left unprotected are all cut. Climbing Devoniensis not quite so forward against walls and houses, very slightly frostbitten. Strong-growing Teas in open border look well. Madame Berard, where not moved last autumn, a little too forward. This is a good Rose. Moderate-growing Teas all alive and doing well. Now we will bid farewell to the garden.

But what is that little glass house in the corner there? Can we induce our steed to enter, or is his head too high? "That, sir, is our forcing house—small, it is true, for we are not rich, nor can we measure our glass by the thousand feet, neither have we a dozen gardeners at command; but, sir, we love Roses, and Roses we must have summer and winter if possible. Enter, and you shall enjoy vernal—yea, summer pleasures, though the paths outside are white with snow, and icicles dangle from the shoots. Behold the Maréchal clothing the back wall, and one of the sides laden with some two hundred buds, many of them just about to expand. See there pale Rubens smiling with modest joy in this haven of rest where no rude blast can enter. Here, too, is Catherine Mermet just unfolding its shelly petals; and here are Princess Mary of Cambridge, gentlest and most tractable of all Roses for forcing; Comtesse d'Oxford, Marie Baumann, Madame Rothschild, Achille Goned, Marguerite de St. Amand, Madame A. de Rougemont, and many others clothed in summer dress, and well set with buds."

Did you ever read what the veteran Rivers wrote with reference to the grafting of Roses? "What can be done," says he, "in the way of propagation in so small a house (12 feet by 8) with method is quite astonishing." And I may echo his words and say, "What can be done in the way of forcing both Roses and other flowering plants with a very small house is truly astonishing. You may, at all events, keep your greenhouse, or conservatory if you have one, always full of flowers, and cut a Rose if you are so minded every day of the year." —R. W. Beachey.

STRAWBERRY FORCING.

Strong healthy plants are necessary to success, and the way I have found to produce them may be acceptable. I do not concur in the plan of layering the runners on the ground where the plants are growing, for if it is a wet season they are apt to be choked by weeds and other runners, and must suffer root-mutilation by removal. If layered in their fruiting pots it is difficult to make the pots stand level, besides bruising the fruit in watering. Some prefer the plan of layering in small pots, using a peg or stone to keep the runners down, and urge that they derive support from the parent plant, which is about all the support they do get, for what moisture can such pots retain in a midsummer sun?

The best plan, in my opinion, is to procure in the latter part of June strong healthy runners free from red spider, cut them with about an inch of stalk before and after the runner, pot in thumb pots in light soil, place in a frame, giving them a good watering; shade with mats whenever the sun shines on them, syringe morning and evening, and keep them close, and with good management they will be ready to pot in a month. I use 6-inch pots and a compost of turfy loam with one-third rotten manure, no leaf soil being required. As soon as potted they are placed on ashes close together (as if a distance apart they only dry more) in a position partly shaded from the mid-day sun by distant trees. In the beginning of September they become too thick, and are removed to a more sunny position along the sides of walks running east and west. If worms are troublesome we use lime water. The pots are turned on their sides during heavy rains, but not put in frames till frosts occur, then the lights are always drawn off, excepting frost and rain.

The varieties are Keens' Seedling, which I find is still the best early kind; Viscomtesse Héricart de Thury, this is a good grower, very prolific, and of excellent flavour; and Sir Joseph Paxton, a variety that produces fruit of better shape in pots than outdoors, is very solid and of excellent flavour. Victoria (Trollope) is discarded, for it is of poor flavour, keeping but very little time after gathering, and a pale colour; the only point in its favour is heavy cropping, and is suitable for those who prefer quantity to quality. Keens' Seedling is grown in 48's. These are large enough for the earliest gatherings, the rest in 6-inch pots, which I consider are not too large. I never water with liquid manure until after the fruit is set. A moist atmosphere prevents red spider. Turf placed on shelves may be all very well for 48's, but with careful watering I think it is not required for larger pots.

Now a word or two as to outdoor cultivation. If the ground is trenched and manured heavily plants ought to remain in good condition for at least five years. The first season or two the crop may be heavier than subsequently, but they are not exhausted. Plant in September, so as to obtain a good start before winter, 2 feet 6 inches from row to row, and 2 feet in the rows. Old forced plants, as they are a season in advance, are preferable to young plants. Give a good coating of rotten manure in November after having given the ground a good Dutch hoeing to cleanse it of all weeds. Do not attempt to dig the manure in, for the heavy rains during winter will wash-in all the goodness, and digging would only destroy the roots. Before flowering give the ground a covering of clean litter. I do not use hay, as it may turn mouldy and destroy the fruit.—G. P., jun.

CALANTHES AT DRUMLANRIG.

Calanthes are grown to greater perfection at Drumlanrig than at any other place at which I have seen them tried. The principal varieties are C. vestita rubra, C. Veitchii, C. vestita lutea oculata, and C. vestita lutea flava. The second last named produces large pure white blooms, which are exquisitely pretty and afford a nice contrast with C. Veitchii. When I saw them last autumn they were nearly in full bloom; some were growing in 6-inch pots, and others were growing in those 4 inches larger. The bulbs in some of these were as large as a 3-inch pot, consequently a 10-inch pot did not contain a great number of them.

In pots of the last-named size I counted as many as sixteen and eighteen flower spikes, some of them being a yard long, and carrying from thirty to forty-five blooms each. The greater number of the flowers were open, a few only at the end of each spike not being fully expanded.

Your readers can form some idea of this marvellous sight when I say there were upwards of seven hundred open Calanthe blooms in a 10-inch pot; dozens of potfuls were in the same splendid order. Armfuls of them were used as cut flowers when the family were staying in the Castle, and when they went to Bowhill a large boxful was sent once a-week to them, and many decayed without ever being cut.

They are very valuable for vase and room decoration, as they keep fresh a long time in such a position. The mixture they are grown in at Drumlanrig consists of rough peat, silver sand, a sprinkling of loam, and a little sphagnum. When in full growth they are occasionally watered with manure water. They are rested after flowering, but not allowed to dry-off or starve at any season.—J. Muir.

LINUM TRIGYNUM AS A WINTER-BLOOMING PLANT.

This beautiful evergreen shrub is usually described as having been introduced from India in 1799 and as flowering in June. Don describes it as a greenhouse shrub which flowers in July. There is no doubt that this is the period of its blooming in its native habitat—the Adwaanee Mountains, and also as cultivated in the gardens around Cawnpore and Lucknow. Dr. Smith has, however, published a figure of it in his "Exotic Botany" for February, 1785, and informs us that it flowered in the stove of Mr. Greville at Paddington in the preceding December. It has therefore been known as a winter-blooming plant for nearly a century.

It is not often we see justice done to this fine old plant, it being generally found in a half-starved state in greenhouses, and producing a few straggling flowers towards the end of summer. That was evidently the case in the time of Don, and it is the case now; but it is worthy of better treatment, and, if this be accorded, it will give a reward by a profusion of its clean bright yellow flowers in the depth of winter. When in bloom the lower temperature of the conservatory or greenhouse appears to be in no way prejudicial to the plant, but during

the period of its growth it must have a more congenial atmosphere to bring it to perfection.

The plan I adopt with a fair amount of success is to secure healthy cuttings and strike them towards the end of March or in April. With a brisk heat they take root quickly and are potted in 3-inch pots, using a compost of good strong loam, manure, and sharp sand. The plants are pinched as soon as they become established, and the pinching is continued at every second or third joint: by this means a compact plant of agreeable shape is secured. They are shifted-on as required, and are eventually bloomed in 7 and 8-inch pots. They are grown on shelves in the stove or other position where they can have light and air, and are duly attended to by syringing and watering. Indeed they have just the same treatment in regard to temperature as the Poinsettias, and are grown with them all through the summer as the best scarlet and the best yellow winter-blooming plants we possess.

The pinching is continued until the end of September, and by this time they are compact bushy plants a foot in diameter and about the same in height. They literally cover themselves with their bright yellow flowers, and are dense balls of bloom for three or four months when the colour is particularly telling. They contrast admirably with Primulas and the usual flowering plants of the period, and are recommended to be more generally cultivated.

The main points of culture are to secure young plants every year, to grow in a warm genial temperature, to pinch frequently, syringe copiously, and give them strong rich soil. When the cultivator has done his duty the plants will do theirs, and will add a brightness to the houses which few, if any, plants of the period can surpass.

As the time is near for commencing preparations to secure a stock of this excellent winter plant, this short narrative of practice may not be inopportune to some of the many readers of the Journal, who, it is hoped, will no longer neglect to cultivate this too-much-neglected plant.—J. Christie.

ROYAL HORTICULTURAL SOCIETY.

March 17th.

The strength of the Exhibition undoubtedly lay in the groups of plants staged by nurserymen, of which the most prominent were the Camellias from Mr. Wm. Paul; the Hyacinths, and Cyclamens, and miscellaneous groups of Messrs. Veitch; and the mixed collections of Mr. B. S. Williams and Mr. Wills. Mr. Aldous also exhibited a small yet healthy collection of decorative plants. A group of Cyclamens from Mr. Goddard, gardener to H. Little, Esq., were very good, but of course not equal to the splendid plants in Classes 14 and 16 which received the first prizes for thirty and twelve plants respectively.

Class 3, Hyacinths. There were only two competitors, Mr. Douglas being first with bold spikes and good foliage; Mr. G. Toms, gardener to H. Wetenhall, Esq., The Poplars, Stoke Newington, being placed second. Amongst the best of Mr. Douglas's group were L'Innocence, pure white; King of the Blues, very intense; Von Schiller, red; Koh-i-noor, pink, General Havelock, dark blue, and Ada, buff; Grandeur à Merveille, waxy white; Laurens Koster, blue; Macaulay, Mimosa, Grand Lilas, and De Candolle. Mr. Douglas was the only exhibitor in class 5 for six new Hyacinths, and had the first prize for Diana, fine blue; Prince Imperial, blue, white eye; Alice, mauve; Oxford, very dark blue; Helen, pink; and Starlight, blue with white eye.

Class 7, for twelve pots of Tulips, there were also two entries, Mr. Douglas being more decidedly ahead of Mr. Toms than in the Hyacinths. Mr. Douglas's twelve comprised massive blooms of the following—Chrysolora, bright yellow; Vermillion Brilliant, Van der Neer, Proserpine (fine), Pottebakker, and Fabiola, all in duplicate.

Class 10, for six Orchids (nurserymen), Mr. Williams was the only exhibitor, and had Odontoglossum Alexandræ with a magnificent spike of sixteen perfect blooms; Cypripedium villosum, Cymbidium eburneum, Vanda suavis, Lycaste Skinneri, and the distinct Masdevallia Lindeni.

In Class 22, for eighteen hardy spring flowers in pots, the first prize was awarded to Mr. Dean, Ealing (the only exhibitor). They comprised well-bloomed pots of the following:—Lithospermum prostratum, Iris reticulata, Arabis albida var. præcox, Viola Victoria Regina, new bedding Pansy White Swan (a promising variety), Myosotis dissitiflora, Grape Hyacinths, double Daisy, white, red, and mauve Hepaticas, Aubrietia purpurea, Scilla bifolia alba, Saxifraga oppositifolia rosea, and Primroses Sulphurata, Single Mauve, and Crimson Queen.

Class 23, six hardy Primroses (acaulis type) double. Mr. Dean was again alone with Double Rose (bright), Double Crimson, very rich, and doubles Lilac, Sulphur, Primrose, and White. He was in the same position in Class 24, six single Primroses of the same type, and had excellently bloomed pots of Fairy Queen, Mauve Queen, Crimson Banner, Violacea, Rosy Morn, and Charmer; also in Class 25 for six plants of the Polyanthus type. The whole of these hardy flowers were very attractive, especially the single Primroses in Class 24.

Silver medals were awarded to the following collections:—Mr. Williams's group comprised a good plant of Adiantum gracillimum, Phalænopsis Schillerians, Abutilon Selowianum marmoratum, Amaryllis Mendeli (a grand variety), Æchmæa Mariæ-Reginæ, &c. Messrs. Veitch had small but beautifully-bloomed plants of Clematis in variety, chastely marked and telling Amaryllis, a basket of Rhododendron (præcox) Early Gem, lifted from the open ground the day previous, and full of flower; fine pots of Crocus, a glorious bank of Hyacinths, &c. Mr. Wills had highly attractive examples of Abutilon Selowianum marmoratum, Phyllanthus nivosus, and P. mimosæfolia, Ficus Parcelli, Crotons Weismani and majesticum, Terminalia elegans, Phyllarthron commorense, Panax excelsa, the distinct and interesting Xylophylla latifolia, Cupania undulata, &c. These plants were very clean and healthy. Mr. W. Paul's Camellias were medium-sized plants in perfect health, and exceedingly floriferous. Compacta alba, Alba plena, Jenny Lind, La Reine, Montironi vera, and Innocenza were amongst the best of the white varieties. Conspicuous amongst the reds were Leeana superba, Mathotiana, and Beali; and of the pinks Comtesse Woronzoff, Reine des Fleurs, Madame Lebois, Augustine superba, and Storyi were the best.

Bronze medals were awarded to Mr. Aldous for his miscellaneous group and to Mr. Goddard for his collection of Cyclamens.

Fruits.—In Class 28, for two bunches of late black Grapes, Mr. Ridout, gardener to W. S. Brown, Esq., Woodhatch Lodge, Reigate, was first with splendid Alicantes; Mr. Wildsmith, gardener to Viscount Eversley, second with excellently-finished Lady Downes'; and Mr. Donaldson, gardener to Lord Chesham, third with Alicante. (Four entries).

In Class 30, for three kinds of dessert Apples, Mr. Parsons, gardener to R. Attenborough, Esq., Fairlawn, was first with fine dishes of Blenheim Orange, Scarlet Nonpariel, and Ribston Pippin; the second prize going to Mr. Clark, gardener to Rev. A. D. Stacpoole, Writtle, Chelmsford. (Three entries).

In Class 31, for three kinds of kitchen Apples, Mr. Parsons, gardener to R. Attenborough, Esq., was first with fine specimens of Alfriston, Blenheim Orange, and Wellington (Dumelow's Seedling). Mr. Woodbridge, gardener to the Duke of Northumberland, having the second prize. (Four entries.)

In Class 32, for dessert Pears, Mr. Clarke was first with Ne Plus Meuria, Beurré Rance, and Knight's Monarch, also in the next class for kitchen Pears.

Vegetables.—In Class 35, for twelve crowns of Seakale, the first prize was awarded to Mr. Clarke, gardener to the Rev. A. D. Stacpoole. (One entry.)

Class 36, for twenty-four Mushrooms, Mr. Record had it all to himself with really splendid examples of high culture.

Class 38, for one brace of Cucumbers, the only entry was by Mr. Douglas with a beautiful brace of his Tender and True, which is evidently a variety of the highest excellence.

Fruit Committee.—Henry Webb, Esq., in the chair. Mr. Clark, gardener, The Vicarage, Writtle, Essex, sent fruit of an Apple said to be Gravenstein, but which proved to be Reinette Bauman. Mr. Bennett, the Gardens, Hatfield, sent a dish of Lowndes' Pippin, a tender-fleshed brisk Apple. He also sent a dish of Uvedale's St. Germain Pears, to which a letter of thanks was awarded. Mr. Monro of Potter's Bar sent a box of Duke of Edinburgh Cucumber containing a dozen fruit, which were much admired, and to which a cultural commendation was awarded, it having already received a first-class certificate. The plants were planted on the 9th of January, and the first fruit cut on the 8th of February. They were grown without bottom heat.

Floral Committee.—R. B. Postans, Esq., in the chair. A first-class certificate was awarded to Mr. H. Bennett, Salisbury, for Rose Hippolyte Jamain. Votes of thanks were given to Mr. R. Dean for a basket of Primroses; to Messrs. Paul & Son, Cheshunt, for two boxes of cut Roses; and to Mr. E. Bennett, gardener to the Marquis of Salisbury, for a spike of Hedychium Gardnerianum; and cultural certificates to Mr. W. Wilson, gardener to — Adams, Esq., for Cattleya Amethystiglossa, and to Mr. W. Shorten for four Cyclamens.

Lily of the Valley—Fly Orchis.—In a wood at Roudsea near to Holker Hall, Lancashire, the seat of his Grace the Duke of Devonshire, the Lily of the Valley grows most luxuriantly, and year by year many thousand roots and hundreds of large bunches of the flowers are brought away by the neigh-

bouring inhabitants, who make the wood a favourite day's resort at the season when the Lily is in bloom. The supply seems to be endless, and if growers would only study the nature of the Lily no fear need be entertained of reproducing the plant year after year.

I find that by placing a number of roots in any useless corner of the garden under trees I can have an unlimited supply. At the present time I have a vast bed in a place where no other flower will grow, and which bed has been there for fifteen years.

In the wood above mentioned we come occasionally upon what is locally known as the Fly Orchid (Ophrys muscifera or Twayblade). It more closely resembles a fly having alighted on a green blade than anything I have ever seen under house cultivation; but despite all efforts I have made, I have been unable to grow them. Can any of your readers assist me with this information?—Beta, *Ulverston.*

OUR BORDER FLOWERS—MASTERWORTS.

This is a small family of border plants of no very striking character, yet interesting as affording variety. I am not aware that we have a native species in this group, yet I believe that Astrantia major is considered by some to be naturalised in our climate. Most of the kinds we have in cultivation are from the Caucasus. They require no particular treatment, but will flourish in moderately good garden soil. They are moisture-loving plants, but should not be saturated with water.

Astrantia maxima and A. major are well adapted for shady places in what is termed a wilderness or open spaces in the shade of trees. Astrantia pauciflora and A. minor are worthy of a place in the herbaceous border. A. carniolica is the most interesting of the family, and is worthy of careful attention; it thrives well in a soil composed of good sound loam, leaf mould, with a little sand all mixed well together, and to be attended to with water. Their star-like flowers make them desirable where cut flowers are in request. They continue in bloom for a length of time, and are easily increased by division either in spring or autumn.

DONDIA EPIPACTIS.

Many of our early spring flowers are now appearing above ground, and will soon reward us for our care of them with their cheerful presence and varied forms. A little diminutive plant seldom met with is beginning to put in an appearance—viz., Dondia Epipactis. It is sometimes called Astrantia Epipactis and Hacquetia Epipactis, and these synonymes are often not a little puzzling to the uninitiated.

To see this little gem to perfection it should be grown in pots in a compost of sandy loam, peat, leaf mould, a little sand, with some broken sandstone in a rough state all mixed together. It requires good drainage, and a rather shaded situation will suit it exactly. It should on no account be suffered to become dry when well established. When grown in a 6-inch pot the surface of the soil should be covered with pebbles or spar, and when the little disk-like flowers and leaves appear through them they have a very pleasing effect.

I have seen plants do well in a peat border and on a rockery, and they may also be kept plunged among alpines or placed in a cool fernery. This plant is increased by division after it has completed its growth. Time, patience and care are required to work up a stock. When well established they last for a considerable time. Being of diminutive stature and unable to endure rough handling, I fear that its cultivation will still continue to be neglected.—Veritas.

MRS. PINCE'S GRAPE.

I can endorse the opinion of your correspondent Mr. Harrison Weir (see page 158) as regards the quality of this fine Grape, which we find here to be the best flavoured of all the late-keeping sorts. The last bunches are now being used, although to all appearance they would keep good for at least another month, as not a single berry is decayed. In some instances, however, the jet-black colour of the fruit has given place to a foxy red, but without the slightest deterioration of flavour.

I should, however, be sorry to follow the example of your correspondent in pulling up all the Lady Downes' variety. We have here a house devoted to the two varieties above named planted rod for rod, and for late keeping both are found to be excellent. Another house of like dimensions is planted with West's Black St. Peter's and Black Alicante, and these sorts, although they are doing as well as could be desired, the fruit is nevertheless greatly inferior to that of Lady Downes' and Mrs. Pince. I should not recommend the extensive planting of either West's Black St. Peter's or Alicante; the former, although a very good variety, is too thin-skinned to hang late in the season, while the skin of the Alicante becomes of a very tough leathery texture, and is very deficient in flavour. Lady Downes' seldom shrivels, and retains its pleasantly piquant flavour to the last; but Mrs. Pince is certainly the best flavoured of all the late-keeping sorts that I am acquainted with.—P. Grieve, *Culford.*

NOTES FROM MY GARDEN IN 1874.

GREENHOUSE.

In my small way I have not—indeed, cannot have—much to record that will interest others; but as I have oftentimes found that I was glad of hints which others might have hardly thought worth giving, it may be that even these trifling matters may help some amateur who keeps his little boat close to shore, as I am obliged to do.

Camellias, then, were, let me say, a failure with me, save in the case of one or two plants, and this I attribute to my having placed them out of doors in summer—a plan, I am aware, often recommended, but one which requires great caution; for if either the pots are so placed that worms can get into them, or watering is neglected, it is fatal to the blossoming: the buds are developed to a certain size, and then they gradually become brown and drop off, and this latter is often the case when there is dripping weather in the autumn. The surface of the pots looks moist and the foliage fresh and green, and one is deceived as to the real state of the balls and roots. My general plan is to leave the few I have in the lower house under the shade of the Vines during the summer, and then move them into the upper house for the winter and spring; but last year I did not do so, and hence to a great extent the cause of my failure. There are some kinds, such as Duchesse de Berri and Mrs. Abby Wilder, which I find drop the buds more readily than others; while some of the most satisfactory I find to be Sarah Frost, Mathotiana, Jubilee, Mrs. Cope, Elegans, Chandleri, and Imbricata. The old Alba plena, one of the very best whites, I find also very liable to drop its buds.

Azaleas, on the other hand, were quite a success; indeed they are, with a little care, the easiest grown of all plants, and for a stage of bloom there is nothing to equal them.

Strawberries were also a great success, and I find nothing better than Dr. Hogg suit my purpose. A friend has told me that, instead of top-dressing the pots when they are placed on the shelf with old hotbed stuff, I should do better to use nearly fresh cow manure, and I am going to try it this season.

I have discarded Primula japonica from the house, and given it a place in the open border. It is doubtless very showy, but to grow it well it takes up a great deal of room and does not afford blooms for cutting, and I therefore prefer giving the room to other things.

I have introduced a few good-sized plants of Arum, for I am very fond of their large white blooms. One of them placed in a tall vase, with a sprig or two of scarlet Geranium and a bit of foliage, looks exceedingly well.

Of show Pelargoniums, thanks to my friend Mr. Turner, I had a capital display filling one side of my house; and the following is my judgment of the new varieties sent out by him in 1874, at least such of them as I have grown.

Blue Boy.—A purplish flower; the top petals of deep colour with a narrow margin, and with a good deal of novelty about it.

Countess.—A very grand flower of fine substance; lower petals salmon pink; maroon spot on upper petals, white centre. Very good.

Chieftain.—A nice, but not first-class flower.

Duke of Cambridge.—I think the finest variety of the season; bright scarlet, medium black blotch on top petals; free-flowering, smooth bright variety. Very brilliant and fine flower, and quite an acquisition.

Duchess.—Rich crimson flower; black top petals, narrow edge, white centre. Somewhat delicate in growth.

Druid.—Lower petals rosy lilac, maroon spot on top petals. Very dwarf habit.

Flora.—Lower petals rosy purple. Dwarf and free-flowering, but not a first-rate flower.

Giant.—Lower petals bright pink, maroon spot on top petals. Very large, but in form not equal to some others.

Protector.—A fine flower; top petals maroon, with lilac margin; fine shape.

Prince of Wales.—Large flower, habit good; lower petals rosy purple; top petals maroon, white centre.

Ruth.—Cherry rose, new in colour; small spot on top petals, white centre. A nice pleasing flower.

Senator.—A mottled purple flower of medium quality.

Statesman.—Lower petals rich crimson, richly shaded; top petals black with crimson edge.

Scottish Chieftain.—Lower petals richly painted crimson; top petals dark maroon, with a narrow fiery margin. A good flower.

Topsy.—Dark flower, of medium quality.

The few Roses that I had in pots bloomed nicely and are looking fairly well again this season; and amongst the plants I had for my later blooming were some very nice Lilies. L. Humboldti is a very pleasing and fine-looking flower, and L. Leichtlini is exceedingly pretty. I did not succeed in blooming Washingtonianum, but I saw it very fine with Mr. Backhouse of York, and am hoping to bloom it and others this season.

I have said my say about my little house, and I think that, although I cannot pretend to any great cultural skill, I manage to have as much enjoyment out of my small house as most people do; and some of my friends are fain to confess that they wonder how I manage it. It is but another illustration of the old adage, "Where there's a will there's a way."—D., *Deal.*

NOVELTIES IN THE ROYAL GARDENS, KEW

In the temperate house a magnificent tree of Acacia dealbata is beautifully in flower. Though it cannot well come under the above title, it is still worth mention. It is more than 30 feet high, and laden on every branch; the leaves are glaucous and very Fern-like, forming with the inflorescence of delicate small yellow balls of flowers a very elegant object. These are produced in long racemes or in panicles with a few racemose branches, all bending in the most graceful manner. In addition to the decorative value as a specimen its branches are useful for cutting, either to stand alone in a small vase or to form the basis of an arrangement in which it stands the chief object. The leaves unfortunately fold in sleep at night.

For high conservatories the best of the strong-growing Acacias should be considered indispensable. After giving form to the specimen by cutting back, the aim of the cultivator should be to promote free growth, when flowers will be produced in proportion, provided of course that the tree has reached a sufficient maturity. Cuttings may be rooted, but perhaps the best way is to raise from seed, sowing about this time. The young plants will soon become vigorous, and so long as sufficiently small will be of value for the foliage to arrange with flowering plants, and may also be used in the same way as A. lophantha for subtropical combinations. A. dealbata and a few other species are cut down largely in the Australian colonies for the sake of the bark, which contains tannin. So far has this been carried that the trees have nearly disappeared.

Toxicophlæa Thunbergi is flowering in the Palm house. It is a beautiful shrub with opposite dark green coriaceous leaves and pure white sweetly-scented flowers. They are produced in Ixora-like clusters in the axils of nearly all the leaves of the young growth. The branches are slender, with foliage and flowers closely arranged, ready at once to form a wreath. It is rare, and plants elsewhere have probably been had from the Royal Gardens. At the Cape it is known to colonists as the Gift Boom or Poison Tree, and a decoction was formerly used by the natives for poisoning their arrows.

A plant very closely allied was sent out by Mr. B. S. Williams about three years ago; it has been called T. spectabilis. Another species is cultivated under that name, but is apparently quite distinct, and of less horticultural value.

Culford.—Mr. Douglas has made a slight mistake at page 165 in his notes of Culford, as he says, "Of bedding Pelargoniums the best white-flowered variety is a hybrid raised at Culford named Dolly Varden; it is a cross between a bronze Zonal and P. peltatum elegans." Now, the flowers of this variety are not white, but are of a dark magenta colour; and what we consider as our best white bedding sort is Bridal Wreath, a hybrid Ivy-leaved sort, but which was not raised here. Fig. 43 is represented as the "Conservatory and Flower Garden," it should be the "Garden Cottage, with Flower Garden in Front." The conservatory, with small garden and fountain in front of it, is near to the Hall.—P. Grieve.

CHIMONANTHUS FRAGRANS.

This is a most valuable winter-flowering deciduous shrub or wall plant. It comes into flower just at a time when every sprig of bloom is welcome, and especially those which possess a delicious fragrance. In this respect this plant is invaluable, for its odour is delightful. We have had a supply of bloom twice a-week from the first week in December until the present time. The blossoms should be plucked off and placed in glass or other small dishes; small sprigs of evergreen shrubs mixed with them add to the appearance. Being so hardy and so easy of cultivation one is surprised at not meeting with it more generally in our gardens. It should be invariably planted in villa gardens, many of which have not the convenience of glass to force other fragrant flowers which require protection from frost and snow. It can be had of any nurserymen. If planted in a south aspect, no matter whether against a wall or rustic summer house, in the month of April in good garden soil it will make rapid growth. At the end of June the leading shoots should be carefully trained, the remaining shoots should be pinched back, leaving six or eight eyes; by leaving them long a much longer supply of bloom is secured. Nothing more is required to be done until after the blossoms are all taken off, when the leading shoots should be secured and the remaining laterals pruned back to one eye.—Joseph Peirce.

GLASNEVIN GARDENS, DUBLIN.

The following is a list of shrubs and flowers in bloom in the open air at Glasnevin Botanic Gardens:—

Anemone stellata
Arbutus tomentosa
  Unedo
Arabis alpina
  auriculata
Armeria cephalotes
Aubrietia albida
  caucasica
  græca
  grandiflora
  hesperidifolia
Bulbocodium vernum
Camomile
Cardamine rotondifolia
Clematis calycina
Coronilla glauca
Crocus susiana and others
Cytisus Alshingeri
Doronicum Columnæ
Draba altaica
  rupestris
Epimedium colchicum
Erica arborea
  herbacea
  mediterranea
Erythronium dens-canis
Forsythia suspensa
  viridissima
Gorse
Hepatica angulosa and others
Helleborus atrorubens
  angustifolius
  abchasicus
  cyclophyllus
  guttatus
Helleborus graveolens
  intermedius
  niger
  odorus
  olympicus
  orientalis
  purpureus
  kamtschaticus
Iris reticulata
  stylosa
Laurustinus in varieties
Leucojum vernum
Polyanthus
Primula macrocalyx
  marginata
  Palinuri
  Double Yellow
  Double Purple
  Double White
Pyrus japonica
Pulmonaria sibirica
Saxifraga cæspitosa
  crassifolia
  hispida
  oppositifolia alba
  retusa
Scilla bifolia
  bifolia alba
  sibirica
Sisyrinchium album
Triteleia uniflora
Viola reniformo
  Double Purple
Wallflower

—P. N. W., *Glasnevin, Dublin.*

NOTES RELATIVE TO THE POTATO.

"Beta's" argument is evidently based upon a misconception, and the point at issue just hinges upon the uncertain opinion of what is a poor soil and what is a rich one. He evidently agrees with me that mere opinion is of very little value, and if any good is to be gained from a discussion, general results—not of a single season, but of several—must form our basis. In proof of this we have only to refer to "Beta's" statement that in a district on the north-west coast, where "the rainfall is the greatest in England," and the disease is usually so virulent that the Fluke is "wore out" by it, yet the Potato crop of last year was "the soundest in the United Kingdom." The fact is interesting, but is of no particular value, and only serves to prove the truth of another well-known fact—that a hot dry season is favourable to Potato culture in a wet district.

There is a great difference in a poor soil enriched by heavy dressings of fat manure and an alluvial deposit requiring none

at all. Alluvial soils are the most fertile of all natural deposits. They contain portions of everything that is washed by the waters by which they are formed. Clay, silica, lime, humus, and a variety of fine gritty substances are intimately blended together, abounding in nutriment, and admirably adapted for Potato culture. If the disease was really caused by the use of rich farmyard manure, surely those grown in such a soil as the above would be perfectly sound. The fact that they are not so affords conclusive evidence that "Beta's" deductions are worthless. It is true that rich manure induces a rank plethoric habit in the haulm, and it is then liable to suffer from disease in a much greater degree than in its normal state. The farmers hereabouts manure their land for Potatoes at the rate of forty cartloads per acre. I have used double the quantity, and had no blight till the August rain set in. Let "Beta" keep to his poor soil and small Potatoes if they content him. I, too, have to deal with a poor soil—so poor that the very weeds will hardly grow upon some portions of it; but I will use all the manure I can, and care nothing for the blight if I can have the crop housed before the late summer rains begin.

Your correspondent is by no means singular in his impression that manure is the cause of disease. It is an old idea to which some persons cling with surprising persistency. It was only a few months ago that I received a copy of an essay, the special object of which was to prove this, and the writer's remedy was actually to burn the manure and apply the ashes to the land!

Three or four years ago some land was taken in hand for Potato culture, which for many years had been so neglected that it was quite innocent of manure. It was a light sandy soil, and so miserably poor that there were very few weeds upon it, although it had been stirred by a plough a few months previously. I was unable to manure the whole of it, and so by way of experiment a few perches of the unmanured portion was trenched and planted with Potatoes. The stock was procured from a leading wholesale firm, who stated that the seed was not only untainted, but that it was absolutely blightproof. Now mark the result. The crop from these Potatoes was very much diseased, while those in the land which was manured at the rate of half a cartload to the perch were almost free from blight!—Edward Luckhurst.

MEALY BUG.

I can confirm what Mr. Pearson says on the impossibility of thoroughly eradicating this king of pests. I have recently attempted to clean two plants much infested with it. Gishurst was applied 2 ozs. to the gallon, then 4, and lastly 6 ozs.; but though apparently got rid of, the pest appeared again, of course from the eggs in the wood, which the compound did not destroy. The injury done to the foliage of one Ixora by so strong a dose is most apparent, and the appearance of the specimen is bad and unpleasant.

I am glad, of course, to say that I have very little mealy bug, though in a large collection of plants like mine I believe it would be impossible to be absolutely without it, and the rapidity with which it increases makes it a most formidable foe. I hate the sight of it. I am equally careful with Mr. Pearson in examining plants from nurseries, but it not unfrequently happens that they are superficially cleaned before being sent away, and thus the eye is deceived. In a few days—almost hours I might say—out comes the pest, and you wonder where it could possibly have lurked. I daily pick all off with the hand that I can see, using a fine but blunt instrument; and one of my gardeners used to say he believed I could smell them, as they never escaped my notice. If I received a plant badly infested I should either destroy it immediately or return it to the sender. To keep the insect down daily vigilance is absolutely necessary; no occasional measures will suffice, and now is the time to be specially active and watchful.—T. M. Shuttleworth, F.R.H.S.

A very cheap and effective remedy for the destruction of the mealy bug is petroleum. I have used it with success on Gardenias, Stephanotis, and other softwooded plants, and have found it instantaneous in its effect, producing sudden death. It has the advantages of being cheap, easy of application, and clean, for being almost colourless and of a volatile nature no traces remain of its application. I have never found any plant on which it has been used any the worse for its application.

Will you let me know if it is an unusual circumstance for a pink Primula to have a white flower on the same stem as the pink ones? I have one now in bloom in my greenhouse. Charles Hart.

[The diverse colours of the flowers on your Primula are unusual. You will have seen our note on the flower you exhibited at the Royal Horticultural Society's Floral Committee.—Eds.]

TRADESCANTIA VIRGINICA.

This is one of the Spiderwort family of plants, and belongs to the natural order of Commelynaceæ. The genus was named in honour of Tradescant, who was gardener to Charles I. The variety figured belongs to the hardy herbaceous section, and was introduced from North America in 1629. It is not only one of the best of its class, but in colour is one of the richest of all flowers. The colour is a bright intense blue, worthy to be compared to that of the beautiful stove plant Tillandsia Lindeni, and is set off to advantage by its small bright yellow stamens. The plant grows to a height of 1½ foot, and is compact and dense, requiring no sticks to support it. It delights in a deep rich soil, and enjoys copious supplies of water in the growing season, but a stagnant soil is injurious to the root during winter. It is an excellent border flower, and should have a place in all collections of hardy plants. It commences to bloom in July, and continues until late in the autumn. In mild winters it is evergreen, but severe frost kills the foliage. This, however, does no harm, as it is certain to push up as vigorously as ever in the early days of spring. It is admirable for cutting from the blooms lasting well in water, and its charming colour is always admired. It is increased by root-division, and than the present month no time is more suitable for increasing the stock or procuring a supply of roots. These must be kept moist during the process of removal.—W.

Fig. 53.—Tradescantia virginica.

HEALING WOUNDED LEAVES.

The following facts may be interesting to some of your readers. I have a fine plant of Amaryllis, some of the leaves of which were accidentally split nearly across the whole width. Knowing the importance of leaves to the development of the bulb I was unwilling to cut the wounded leaves off, and I applied some Friar's balsam on both sides of them, held the broken edges firmly together by means of little bits of cotton wool and slips of paper, and supported the leaves with sticks

and list. In the course of a fortnight the fractures were entirely healed, the leaves self-supporting, and there are now only slight scars remaining not the eighth of the length of the original wounds.—E. E. P., *Richmond, Surrey.*

[Our readers will smile when they first read of applying Friar's balsam to a wounded leaf, but the application is justified by frequent practice. There is not, probably, any more healing power in the Friar's balsam than in gum water; any such application excluding the air and preventing the lips of the wound drying would be effectual. The sooner the wound is closed the more certain the healing.—Eds.]

ROYAL HORTICULTURAL SOCIETY.

To those who attended the adjourned meeting on Tuesday the 9th inst. it must be well known that at an early stage of the proceedings I was about to make a few observations, but the Chairman ruled that a gentleman rising at the same time as I did had the precedence. The remarks I desired to make had no reference to the report, and therefore after the amendment was proposed and seconded thought I should be out of place in intruding my general remarks on the meeting: hence my now writing.

It has been observed, both outside the Royal Horticultural Society and in, that the professional horticulturists take but little prominent part in the Society's annual meetings, that their voices are seldom heard in the discussions, and therefore they have been treated as nonentities and as unworthy of any consideration: I judged, therefore, it was necessary for some one of them to explain their position and set the case right to the Fellows generally.

There are various reasons for the reticence and seeming apathy of the professional horticulturists at the Royal Horticultural Society's meetings. They as a body, from their studious avocation, are somewhat diffident; their opinions are seldom or never asked except in a secondary way, and hence the small action they have prominently taken; and some of them feel—I among the number—that they could not spare the time to always take an active part in the Society's affairs, but those that could not do so would zealously support their colleagues.

When alluded to, however, it must be apparent that horticulturists cannot possibly take any zealous interest in the Royal Horticultural Society constructed as it is at present, for it is a Society formed for a technical object, but with a Council elected for carrying on its work with few exceptions composed of gentlemen almost entirely devoid of the necessary technical knowledge for that purpose. But what would be thought of the Royal Medical Society if it had no doctor on its Council? Would the Linnean Society of London be looked up to with the respect it is by scientific men throughout the world if its managing members had not a profound knowledge of botany and zoology? Would the Architects' Association carry on its work for any good purpose if no architects were on its board? In what an anomalous position, then, is the Council of the Royal Horticultural Society without a single professional horticulturist belonging to it?

I know all the objections that can be urged against this. It has been said that the Council of the Society could not be composed of gardeners. Possibly not: but there are gardeners and gardeners, and I am afraid the professional horticulturists would be found lacking much of the technical knowledge that a gardener requires. However that may be, there have been eminent men who have not been ashamed to be called gardeners. The professional horticulturist, however, is only a gardener somewhat in the sense that an architect is a carpenter or mason.

Again, it has been urged that if professional men were on the Council of the Royal Horticultural Society it would be swayed by trade influences. But has anyone ever heard such an argument against the Chemical Society because chemists direct its affairs? or, indeed, can such be alleged against other societies because professional and business men take an active part in their administration? It has also been stated that it is of the utmost importance, considering the state of the Society's affairs, that good financiers should be on the Council rather than horticulturists; but I have yet to learn that the latter are wanting in this respect. The yearly expenditure or monetary transactions of the Royal Horticultural Society are as nothing compared to those of the best horticulturists, which are generally guided to a successful issue.

The many failures in the Society's affairs are owing in a great measure to one great fundamental cause, and that is that the Society has never, since I can remember, had a thoroughly practical horticultural council—a council in which the horticulturists throughout the United Kingdom, both professional and amateur, could have perfect confidence. If it had I have little hesitation in saying that instead of four thousand it would have nearer forty thousand Fellows, and not by reducing the subscription, as a member of the late Council has proposed, for now there is a two-guinea fellowship.

Alluding to a member of the late Council reminds me that it did good horticultural work by establishing the provincial exhibitions. These, however, have fallen through, as I believe they also would if they had been carried on by the late Council, for the simple reason that if the Royal Horticultural Society of London is desired in the provinces it is not because of its name, it is not in consequence of men of great social influence being on its Council—for in any district there are county families; but what is desired is to hold communion with, to make the personal acquaintance of, and to fraternise with men whose names are known, not alone at Kensington but throughout the horticultural world, for their technical knowledge and their practical experience, and there were only one or two such on the late Council.

With fair management and with such a Council as I have suggested I have no doubt an annual profit of from £1000 to £2000 would be made from the provincial exhibition, and this besides doing legitimate horticultural work, enlisting the sympathy, and making a large number of Fellows in the districts which were visited. But I venture to say, and I do so with some regret—still it is necessary to be candid, although I should be sorry to wound the feelings of the Council—that beyond a few their names would not be known in connection with horticulture outside the Horticultural Society. What an anomalous position, then, horticulture in London is in. If it were necessary for the Society to send a deputation on any horticultural matter abroad, beyond one or two their names would not even be known.

Fortunately, however, horticulture does not depend on any society, the love of it increases with the higher development of civilisation; still professional horticulturists cannot but deplore the present state of what should be the first horticultural society, not in England alone, but in the world. And this brings me to the consideration of the Horticultural Gardens, for about these I differ somewhat from my colleagues.

They are leased on such easy terms that I am not one of those who advocate giving them up; for whatever may be said against these gardens, I consider them a monument of horticultural skill as a town garden, and from what I have seen I much doubt if they are to be equalled in any capital in Europe. The rent need only be paid once in five years—something, therefore, under £500 a-year for those magnificent ornamental grounds. I know it is stated that £500 a-year cannot be set aside to defray the rent; that £2400 must be paid in one year, and that every fifth year; and here again crops-up the want of a truly practical horticultural council, for various ways would then suggest themselves of easily providing the rent. A plan occurs to me at this moment—viz., to hold a grand international horticultural exhibition every five years. I doubt not the horticultural Fellows would provide a guarantee fund, and if not, I believe the professional horticulturists would subscribe it themselves. But work such as this would involve could scarcely be expected from amateurs, much less from those who are not horticulturists. Amateurs may render good advice and service, but in practical work and technical knowledge they can seldom be expected to take the place of the professional man. If any one had a sick child they would scarcely send for their amateur friend who has always a favourite pill to prescribe or some essence to recommend, but would rather send for the man of professional skill, in whose practical knowledge the utmost reliance could be placed. The Horticultural Society is now that sick child, and the inference is obvious.

If the primary object of the Horticultural Society is to be merely the keeping of the gardens at Kensington as a London square, then good horticultural work is not of paramount importance, and it matters but little how the Council is constructed; but if the legitimate objects for which the Society was founded are to be carried out, it behoves the Fellows to take action and see that a good Council of the best professional and amateur horticulturists are guiding it.

As an instance of what practical horticulturists can do, I may mention that previous to 1865 we at different times had been receiving invitations from our foreign friends to international entertainments, we had accepted of their hospitality

which was given with no ungrudging hand. The English horticulturists felt they must do something in return, and like Britons they were determined it should be well done, so they projected an International Horticultural Exhibition. They applied to the Royal Horticultural Society, but then, as now, their Council was too technically weak to do anything in the matter. The horticulturists, not to be beaten, then did it themselves at an expense of something like £20,000 (that magnificent Exhibition will still be in the recollection of many of your readers). As the time neared for closing that Exhibition it was found there would be a deficit of some thousands of pounds. Here, again, the practical element rose to the surface; the Committee held a conference, and decided they would not call on the guarantors that had given it their confidence, but that they would continue the Exhibition a few days longer. This was an easy matter, for several on the Council were large exhibitors, and the other exhibitors were their friends. In the end, instead of a financial failure it was a success, so much so that the Committee actually had a surplus of £2000, which they scarcely knew what to do with. They gave £1000 to the Gardeners' Benevolent Institution, and bought the Lindley Library, which they presented to the Royal Horticultural Society, otherwise to this day there would not be so much as a library belonging to the Society.

I cannot pass from this subject without paying a tribute to the excellent generalship of Lord Bury. I have sat at the anniversary meetings of many societies, but I have never seen a president who could meet great difficulties and smooth over extremely perplexing circumstances as easily as his lordship.

At the last meeting of the Horticultural Society one or two gentlemen incidentally mentioned that they belonged to three or four learned societies. When the observation was made (for I also belong to eight or ten) it occurred to me how different they must consider the annual meetings of the Royal Horticultural Society to those of other societies, when it is usual for the president or some member of the council to give a short retrospect of the important events of the year, with glimpses of what are likely to occur in the future, and some of the Fellows of the Royal Horticultural Society would have been glad to have heard from the President what part the Society took in that great assemblage of botanists and horticulturists at Florence last year; what they intend to do this year at the International Exhibitions at Cologne and Antwerp; as also what they purpose to do next year in Philadelphia.

What can be thought of the arrangements for the flower shows at Kensington this season? The Committee issued a schedule announcing what shows would be held, detailing the objects for which prizes would be offered. They then advertised that four of those shows would not take place; but at the last meeting announced that they would all be held, but that exhibitors would be asked to take 50 per cent. less than the prize money that had been offered. Can vacillation go further than this?—William Bull.

[We have received from Mr. Cuthush, just at the eve of going to press, a letter controverting a somewhat generally accepted idea—that the principal exhibitors had been consulted in the matter of the postponement of shows. His firm had not been consulted, but received a special communication that the spring show was abandoned, and as a consequence his Hyacinths were retarded to form a show at Highgate in Easter week.]

THE PREPARATION OF FORCED FLOWERS.

We have many beautiful hardy flowering shrubs which are gratifying to the eye and grateful by their fragrance. We have the Kalmias, hardy Azaleas, Lilacs, Rhododendrons, and a host of things too numerous for me to think of at this moment; but I suppose the prevailing idea with too many people is, that because a plant or shrub is hardy it will stand any amount of rough treatment with impunity.

With respect to hardy shrubs I can give convincing proofs of the good results of the treatment I so strongly recommend, and facts, being stubborn things, will speak for themselves. I have now (February 18th) two nice bushy plants of Rhododendrons in full bloom. They are in 10-inch pots, and would be no disgrace to an exhibition tent. One plant has over thirty well-developed trusses of bloom on it, the other not quite so many, but still good. Now, in making this statement, it is not with an idea to cause a sensation and advance something unheard of; that is not my motive, as there are many equally good plants in the country at this moment. In mentioning these plants my main object is to remark that they are not forced, but their early blooming is simply the result of last year's treatment; neither are they early-forcing kinds, but such as would in an ordinary way bloom in April and May. Last year they were moved to a late vinery after blooming; there they made their growth and set their bloom buds. After this they were turned out of doors, and plunged up to their rims in the borders, so as to save watering, and when the winter frosts set in they were packed closely together with other things, and the pots covered with Brakes (Fern). There they stood the ordeal of 30° of frost, yet, notwithstanding, they were in January actually bursting their bloom buds and showing colour. They were then placed, not in the forcing house but in a cool vinery, to open their blooms.

The line I have marked out for one or two things is equally applicable to many others. Deutzias come under the same treatment as the foregoing; and in reading Mr. Dodgson's cultural remarks I made a pause when I read the words "when they have done blooming turn them out of doors to make their growth." It is the turning-out question from which I must dissent. Yet I would not be dogmatic and say that they will not bloom under such treatment; but I feel that it is against the natural order of things to enforce that mode of culture. I am fully convinced that growing them, and, to a certain extent, ripening their wood under glass, is the royal road to success. By that treatment they will give us quick returns the following season with a minimum amount of fire heat, and will pay us back with interest for the reasonable care bestowed on them after blooming.

This is simply an outline of practice and experience on a detail in the culture of forced shrubs, which I sometimes think is not so generally adopted as it should be. On this point, however, there may be a divergence of opinion; but on this I have only to say that a kindly-expressed difference with the sole object of eliciting truth is what we should all aim at, and at all times endeavour to make the person subservient to the subject. Now that the blooming period of forced shrubs will soon be over I ask that the plants have reasonable care, and by making their growth and forming their buds early under glass they will unfold their blooms proportionately early another year, and this with the least amount of forcing. Does not this suggest, that by simple and proper preparation of the plants, many who do not possess highly heated structures may yet have hardy shrubs blooming in their vineries or greenhouses during the earliest months of the year?—G. R. Allis.

BOILER FOR HORTICULTURAL USES.

About two years ago I had a cast-iron saddle boiler, which was a good boiler of that class, but, like all other common saddle boilers, there was great waste of fuel. As I was erecting more houses and adding more piping I required a larger boiler, and fixed upon one on the coil principle. In fact I bought two, and had them fixed so as to work jointly or separately at will, which with me proved a failure; and last November I had them removed and replaced with one on the saddle principle, having a water-way back with two intermediate flues. The hot air is made to pass underneath these flues to the back of the boiler, up the back, and over the top as in the common saddle.

I have a boiler now heating 1400 feet of piping—viz., hard forcing with about two-thirds the amount of fuel, and instead of having to remove every other day a barrowful of ashes to be used by other boilers (which in the coil boilers could not be used up), this is all consumed. This boiler is quite capable of heating 2000 feet of 4-inch piping. If my memory serve me right this was about the second boiler cast and offered to the public on this principle. It is cast in sections and bolted together by strong iron rods, so that if in case more piping is required one or more sections can be added with little trouble. It is made by Boulton & Paul, Norwich. I like it so much that I intend removing another saddle boiler to make room for one like it. Anyone in want of a boiler would do well to see this in full use.—T. Harwood, *Market Gardens, Attleborough.*

THE BEECH (Fagus sylvatica).

There is no reasonable doubt of the Beech being the Fagus of the Romans. Pliny says that this bore the sweetest of mast, that it was a nut enclosed in a three-angled rind, that hogs delighted in the mast, and that the pork they formed was especially wholesome. The fruit of no other European tree than that of our Beech agrees with those particulars. It

has been concluded that the Beech is not a native of England, because Cæsar in his "Commentaries" states that "timber of every kind, the same as in Gaul, except the Beech and Fir," are in Britain. If he had prefixed to that sentence "I saw," he would have truly recorded the extent of his knowledge; but he was not justified in writing so comprehensively, inasmuch as that he never penetrated into what are now our midland counties, and only into a very small portion of our seabord. He never advanced as far as that district which the Romans' successors—the Anglo-Saxons—named Buckingham, which, using Camden's words, "is given to bring forth Beech trees plentifully, which the English Saxons in elder times called Bucken." As early as the times of Edward the Confessor, more than eight hundred years ago, the woods of Burnham in that county afforded pannage for six hundred hogs. Pannage was the old legal term for the right to the food afforded to swine by the mast of the Beech and Oak. I believe that the still-celebrated Burnham Beeches, a few of which are portraited in the annexed illustration, were then in existence. There is a tradition that they were pollarded in the time of Canute, eight and a half centuries since. The Beech has a peculiar mode of revivification. Its trunk may be hollow—the wood entirely decayed—but one branch remaining vigorous thrusts down to the earth, along one side within the hollow, a slender stem, which roots and becomes another trunk.

The poet Gray observed that "There is a character about the Burnham Beeches distinct from all others. They are not lofty, for they appear to have been headed-down at some time or other, but they are of enormous size, and the pruning of the heads seems to have thrown a superfluous amount of vigour into the trunks. Nowhere else do the trunks of Beeches, as a rule, burst into such strange forms, or so wreath their old fantastic roots on high. Every second Beech trunk here is a study for a painter." They are still all that Gray described nearly a century and a half ago.

I consider the Beech one of the most beautiful of our forest trees; and although the most fault-finding of critics, Gilpin, is adverse, I will quote his admissions in support of my estimate: "Its trunks are often highly picturesque. It is studded with bold knobs and projections, and has sometimes a sort of irregular fluting about it, which is very characteristic. It has another peculiarity also, which is sometimes pleasing, that of

Fig. 54.—Burnham beeches.

a number of stems arising from the root. The bark, too, wears often a pleasant hue. It is naturally of a dingy olive; but it is always overspread in patches with a variety of Mosses and Lichens, which are commonly of a lighter tint in the upper parts and of a deep velvet green towards the roots. Its smoothness also contrasts agreeably with these rougher appendages. No bark tempts the lover so much to make it the depository of his mistress's name. It conveys a happy emblem—

'—— crescent illæ; crescetis amores.'
(As they increase; the loves increase.)

"Virgil was right in choosing the Beech for its shade. No tree forms so complete a roof. If you wish either for shade or shelter you will find it best

'—— patulæ sub tegmine Fagi.'
(Under the cover of a spreading Beech.)

"Sometimes we see in Beeches of happy composition the foliage falling in large flakes or layers, between which the shadows have a forcible effect when the tree is strongly illumined.

"Contrary to the general nature of trees, the Beech is most pleasing in its juvenile state, as it has not yet acquired that heaviness which is its most faulty distinction. A light, airy, young Beech, with its spiry branches hanging, as I have just described them, in easy forms, is often beautiful. I have seen also the forest Beech in a dry hungry soil preserve the lightness of youth in the maturity of age."

The surface of the soil beneath that shade is bare. The Lesser Periwinkle (Vinca minor), and a few Orchidaceous plants, such as Gymnadenia bifolia, sometimes live in the shadow, and the Morel and Truffle are fostered by it.

The Beech is one of the most useful of trees. In Switzerland mattresses are stuffed with its leaves. Its nuts yield an oil useful either as olive or lamp oil; and the cake which remains after the expression is a good food for fowls and pigs. The wooden shoes, *sabots*, worn by the French peasants are made of the wood; it is excellent for fuel, and vinegar (pyroligneous acid) is distilled from it. Turners form of it trenchers, bowls, and other utensils. Joiners and cabinet-makers employ it for furniture. If kept constantly under water it is as durable there as the wood of the Elm. The exterior rings of the wood are used for forming band-boxes. The millwright uses it for the cogs of wheels, and the wheelwright for spokes. In the coal mines it is used under the name of "Newcastle railing." Like the wood of the Lime it is used for piano sounding-boards. Tool-makers employ it for handles, and cask staves for dry goods are made of it.—G.

Arbor Day in Nebraska.—The project of tree-planting in Nebraska, and the idea of devoting one day in the year exclusively, known as Arbor Day, for the entire population to indulge in planting, originated with J. Sterling Morton of Nebraska city. The first Arbor Day was held in the spring of 1871, when 2,000,000 trees were planted. In 1872 and 1873 Arbor Day was not celebrated, but it was recommended to the farmers to choose for themselves a day in April, and set it apart for tree-planting. This year, however, the State Board of Agriculture has determined to go back to the original plan. It has been resolved that Arbor Day shall be the second Wednesday in April, and the State Legislature is to be asked to make the day a legal holiday. Each owner of land is

recommended to plant at least one tree, and the State Board will award a premium to the person who plants the largest number. It is now the custom of the Board to give a premium to the landowner who has planted the most trees on any given day in April, and at a recent meeting of the Board the prize was awarded to a farmer who set out 27,800 trees on the 28th of April, 1873.—(*American Horticultural Journal.*)

PRIMULA CORTUSOIDES AMŒNA.

Notices of this very beautiful Primrose have from time to time been made in this Journal. Its great beauty and easy culture ought to make its presence welcome in every greenhouse, where it cannot fail to be appreciated. The much-vaunted Primula japonica is not to be compared to it in beauty, though it, too, is a fine Primrose; and although both come to us from Japan, I have no hesitation in claiming for P. amœna priority and extended culture.

I have no experience of it planted outdoors, though the Messrs. Veitch who introduced it state it to be perfectly hardy. As a pot plant it is quite charming for the greenhouse, and is admirable for window culture, it blooms so freely and requires little care or attention.

In an ordinary greenhouse—one having a temperature of 40° to 45° at night, and 45° to 50° by day from fire heat—it commences to grow in February or early in March, and is in flower at the close of that month or in April. It continues a considerable time in flower, the colour a rich rosy purple. In a cold pit or frame it flowers later; but it is as a greenhouse plant that I wish to note it.

Being herbaceous, or losing its leaves some time after flowering, it ought up to that time to be kept watered, so that the leaves do not flag, and when they begin to turn yellow water should be withheld, removing the leaves as they decay. It is the best of slight shade, as all the Primulas are. I place the pots amongst those of Heaths and other hardwooded plants, whose heads afford the Primula plants an agreeable shade. The pots remain in such a position from the decay of the foliage without water, or only a little occasionally to keep the soil with a certain amount of moisture in it, though to all appearance dry.

When they begin to grow (as they will however dry the soil), at their proper season the plants are potted, turning them out of the pots, and removing any soil not occupied by roots. The smallest size of pot used is 4-inch, and the largest 6-inch. The former size will suit plants of one, two, or three crowns, which are produced at the end of short creeping stems just below the surface, lower than which they should never be potted. Keep the crowns as much in the centre of the pots as practicable. In the smaller size of pot I put one large or two and three smaller crowns; and these are a very useful size of pot and plant for working-in between larger-sized pots and plants, and for margins of stages, &c. The larger size of pots takes the plants entire which were grown in 4-inch pots the year previously, and these give plants with a profusion of bloom as large as I care to have them. They of course may be shifted annually into pots 2 inches larger in diameter, and in a few years magnificent clumps will result, luxuriating all the better for the increased depth of soil. When potting from the 6-inch pots I divide the plants into as many divisions as the plants have crowns at greater distance than 2 inches apart.

The pots are well drained, with a little of the rough of the compost placed over the drainage. The compost used is three parts turfy loam, one part leaf soil, and a half part sandy peat with a half part of silver sand, well mixed. I pot moderately firm. Water is given in proportion to the growth, always keeping moist after growth commences, and liberally when in flower. If at a distance from the glass the foliage and flower stems are liable to be drawn, but on the front shelf of a greenhouse they are all that could be wished.

There are now three varieties besides the one named—viz., alba, in habit and style of flowering the same as the original, only the flowers are white and rather more drooping; grandiflora, which has much larger flowers than amœna, concave or cup-shaped, slightly drooping, the exterior of the flower deep rose, inside white, forming a very pleasing contrast; and lilacina, which is similar to the type in habit, the ground colour of the flowers is greyish white, beautifully marked and streaked with lilac.

I have tried to cross the beautiful amœna with the Abyssinian Primrose (P. verticillata) with a view to scent, but failed; but the Japanese Primrose does not resist the pollen of that variety, and I am in hope of obtaining a break, and securing perfume for both amœna and japonica.—G. Abbey.

NOTES AND GLEANINGS.

A Fruit Show on the same extensive scale as before is to be held again at Edinburgh on the 15th and 16th of September next. The premier prize of £10 for Grapes is for eight varieties, one bunch of each. There is a second class, for which those who show in the first class shall not enter. In the collections of fruits the number of dishes is reduced to sixteen, and the collection of sixteen to twelve. There are several presentation prizes offered: Messrs. Sutton & Sons of Reading offer three prizes of five, three, and two guineas for four varieties of Melons and the same of Cucumbers; Messrs. Boyd, the horticultural builders, Paisley, offer a silver cup for stand of six varieties of Grapes; Mr. Munro of London, three prizes of three, two, and one guinea for the best brace of his new Cucumber Duke of Edinburgh.

—— We record, as most worthy of imitation, that on the evening of the 2nd inst. G. S. Boulger, Esq., gave the first of a series of Educational Lectures on Window-gardening in St. James's School-room, Norland Square, on behalf of the Notting Hill Flower Show Society. Mr. Boulger entitled his lecture "Window-gardening and Floral Culture," and gave a practical exposition of the domestic arrangement of plants adapted to the capacity of the non-botanical, of whom, as may be imagined, the Society consists.

—— The Commission for the regulating of National and International Horticultural Exhibitions in the Palace of Industry at Amsterdam has resolved, in conjunction with the horticultural establishments and similar societies and associations in Holland, to hold in 1876 in Amsterdam an International Horticultural Exhibition and Congress on an extensive scale in the Palace of Industry.

—— A correspondent writing from Chicago informs us that on February 8th the thermometer was 6° below zero, and had during the winter been as low as 29° below zero. Nurserymen have suffered severely, some losing all their plants. Let us hope by this contrast we may not speak too hardly of the severe English winter from which we are just emerging.

NOTES ON VILLA AND SUBURBAN GARDENING.

Propagating Bedding Plants.—Having last week made some remarks on the raising of seedlings, I this week take up the kindred subject of raising plants from cuttings. This mode of propagation ought now to be in full activity, and where good stocky plants of young and free growth are in request for the flower garden means should be provided to give them every encouragement to that end.

It is much more satisfactory to put out a well-grown plant which will under ordinary circumstances give a good effect at once than to plant one that has been badly grown, and perhaps in a starved condition, and which requires considerable time to recover itself. I advocate spring propagation as much as possible, ensuring as it does plants with good health and vigour to withstand successfully the ordeal of a summer's sun alternately with the smoky atmosphere so prevalent in and around large towns.

I do not advocate the growing-on of autumn-struck stock plants for summer bedding of such things as Verbenas, Petunias, and several other softwooded plants (the Geranium class excepted), which have been for months cramped thickly into pots till their roots are matted together, and the wood has become hard and the plants altogether out of character. Rather would I advise that all such things be placed where a young growth can be made from which to raise the stock of plants, throwing the others away when that is done; and it is surprising how soon a stock of plants can be raised from such growth if proper attention be devoted to them.

The conditions are very simple—viz., a moderate heat with a close atmosphere, not too dry nor too damp, but such as would be secured by placing a handlight or two on the bed, in the vinery, or even in the greenhouse or heated frame or pit. This done, the mode of putting in the cuttings may be as follows:—

Prepare pots of a moderate size, say 48's or large 60's. They must be clean inside and out. Fill up one-third with a suitable drainage, coarse at the bottom and fine on the top, consisting first of broken pots and then small pieces of charcoal; cover this with a very thin layer of moss, or in the absence of this some fibry turf, to prevent the fine soil from running down among the drainage. Next prepare the soil, which ought to be fairly dry so as not to bind when handled; it may consist of loam one-half, the remainder leaf soil well rotted, and good

sand. All this should be sifted fine and thoroughly well mixed together with the hand. Each pot should now be filled up to within half an inch of the rim, pressing the soil moderately firm; upon this add a layer of good silver sand. After preparing as many pots as are likely to be required for the first batch of cuttings take them into the house and water the whole with a fine-rosed watering pot, so that the soil may be moderately soaked without washing the sand off the surface.

In putting in the cuttings, which may be about an inch apart, it is a fact worthy of observation and practice that each cutting should be thrust into the sand without previously making a hole for it. This ensures the base of the cutting being placed firmly in the soil, but in order to do this easily and without injury to the cutting every pot must be again watered just as it is going to be used, which renders the sand soft, and consequently the cutting is easily thrust down into it. After the pot is filled with cuttings it must once more receive a gentle watering sufficient to float the sand, which when the water drains out settles closely round every cutting, fixing it firm.

The after-treatment of these cuttings must not be forgotten, for wherever they are placed they should have the lights taken off once a-day, generally in the morning, and allow them to dry themselves. This should be done regularly, because it is a preventive against damping-off, which so frequently occurs among such tender things as these. During the time they are rooting they will grow considerably, but after that has taken place the tops should be pinched-off, which will make another cutting, and so the stock may be quickly increased. The rooted cuttings thus treated will soon break into growth at each joint, when no delay should take place in having them potted-off.

I may here remark that the preparation of the cutting is very simple. There is no need for it to be cut to a joint, provided it is thrust into the soil up to the first pair of leaves, when it will soon throw out roots. Almost every kind of softwooded plant may be propagated in the above way, and it enables so many more cuttings to be taken from a plant, and a stock is thus raised more expeditiously.

The growth must be young and healthy, otherwise the system will not be so successful. Hard wood seldom roots freely, let it be propagated which way it may, neither is it so likely to make a good plant at any time as a cutting from crisp young growth. —Thomas Record.

DOINGS OF THE LAST AND PRESENT WEEKS.

KITCHEN GARDEN.

March is proverbial for its changes. It came in boisterous enough this year, with frost every night for the first week. On the first day of the second week it was very mild, the wind blowing gently from the south, and for two days more we had western breezes. The wind then suddenly changed to the cold quarter, and the night temperature, which had risen to 48° and 49°, as quickly fell to 26°; yet the winds have been drying in their nature, and gave us an opportunity to fork over the surface of the ground wherever it had been lying as it was dug or trenched in the autumn. Ran the hoe through autumn-planted Cabbages. The ground had become hard and required to be broken up to some depth, and for this purpose a swan-necked draw-hoe is much better than the Dutch tool. We have tried different sorts of Cabbages for this crop, and find the Dwarf Early York to be the best. Enfield Market will give the largest produce from a given space, but they are coarse-looking. Even the farmers who grow for market plant large breadths of Early York.

Some Cauliflower plants in boxes will be planted out as soon as the weather is favourable. The ground has been turned over and is now quite dry on the surface, and will be in good condition for the crop. Pricked out Onions from the rows where they had been sown thickly in autumn. The plants are put out in rows about 9 inches apart and from 4 to 6 inches between the plants. Autumn-sown Onions are seldom attacked by the maggot, and this system should be adopted in gardens where the maggot is troublesome.

Sowed Brussels Sprouts on a piece of poor soil: this is one of the most valuable of our winter vegetables, but the plants often club with us when sown late, and early-sown plants are more free from the maggot. Forked over the ground lightly between rows of Peas in preference to hoeing. Planted out Lettuce. A little seed of Hicks' Hardy White Cos had been mixed with the autumn-sown Onion seed, and some of the plants had been put out in the autumn. This year those planted last season are a comparative failure, while the plants that were not moved are in good condition. Sowed Celery in a warm border out of doors. The soil was wet and unsuitable, but by placing some fine dry loam on the surface an excellent seed bed was obtained. Sowed more Radish seed also in a sheltered place; the first sowing in the ground vineries has been thinned out. Any glass protection that can be placed over early vegetable seeds at this season is of great advantage to the crop.

Planted out some Seakale plants on rich and well-worked ground. The old plants that have been forced may be used for this in addition to the seedling plants of last year, which were too small for potting-up for forcing. Coal ashes placed over the crowns is of some advantage to the plants. About the end of this month or early in April is a good time to sow the seeds of Seakale.

FRUIT AND FORCING HOUSES.

Pineries.—But little can be added to the remarks in the number for March 4th. Plants that have ripe fruit or fruit that is nearly ripe ought to be taken out of the house where the temperature is 70° at night with a moist atmosphere, as in such a place the fruit soon shows symptoms of decay. The most convenient way is to cut the fruit, and remove it to a dry room where the temperature does not vary much in the twenty-four hours. If the fruit is not quite ripe, and is also sound when it is cut, it will keep for a month after being cut from the plant. Those plants that are furnished with suckers ought to remain in heat until the suckers are large enough for planting out; they grow more quickly on the parent plant than they do if they are removed and potted in a small state.

Those who grow only a very limited number of plants will find it a good plan to plant the suckers just when they can be obtained; and when the plants have well filled the pots with roots, though they must not become pot-bound, let them be potted into the fruiting pots at once. We used to pot the plants into 9-inch pots first, and then into the fruiting pots, thus making two shifts; after trying both ways it has been found that the greatest advantages are in favour of the one-shift system. We have some autumn and winter-struck plants of Smooth-leaved Cayenne and Charlotte Rothschild that will be potted as soon as possible. The compost which has been described in previous numbers is mixed up and placed in the house for a day or two to become warmed before using it.

Dwarf Kidney Beans.—A succession of these can be kept up by sowing a box thickly with them, and potting them off when the seed leaves are fully developed. We have found them bear most abundantly and continue the longest in bearing when four or five plants are put into 7-inch pots. They are kept free from insect pests by daily syringing, and the minimum temperature is not less than 60°. It is marvellous the quantity of pods that can be gathered from two or three dozen pots of the little Newington Wonder if none of the pods are allowed to become too old. The soil should be four parts good turfy loam and one part rotted manure.

Strawberries.—The whole of the pots of Black Prince have been removed from the forcing houses, to be succeeded by Keens' Seedling. Some of the most extensive growers have told us that their plants have not thrown-up so freely as usual. Probably this was more owing to the unfavourable weather at the time than to the fact that the crowns were not thoroughly matured last autumn. We had an abundant crop of Black Prince, though the fruit was not so large as usual. Keens' Seedling is now in flower, and the abundance of well-developed blossoms seems to ensure a good set. Alternate waterings with weak liquid manure are very beneficial to the plants as soon as the first young leaves are formed.

MUSHROOM HOUSE.

The details of work in this department are so much alike from week to week that frequent remarks are only a repetition. The spent manure from the beds is very useful for mulching newly-planted trees, Roses, shrubs, &c., or it may be laid-up in a heap, when it will be equally valuable for mulching all growing crops during the summer months. None of the beds need be empty at this time, but as soon as any of them are quite exhausted fresh beds should be made up. Our own experience has been in favour of mixing a portion of cow manure and a little fibry loam with the horse droppings. Splendid large fleshy Mushrooms have been produced by mixing horse droppings, cow manure, and loam in equal proportions.

The most important matter in making-up Mushroom beds is the state of the material at the time. This must be thrown-up in a heap sufficiently long to allow of the rank steam being thrown off. If it is too wet it must be spread out on the floor of an airy shed for a few days until the superfluous moisture escapes. If the bed heats violently after being made up, this will show that the material has not been well prepared.

The quality of the spawn should not be doubtful, and expense should not be spared to obtain the best in the market. The bricks should be broken-up into pieces about the size of a pigeon's egg, and the bed may be spawned when the temperature has fallen to 80°. The surface of the bed should be pressed down firmly, and when in the course of a week after spawning the dressing of loam is put over the bed, this must also be beaten down firmly with the back of a spade.

PLANT STOVE.

The sun has now begun to act very powerfully upon the glass, and it has been necessary to put up the shading, not as a fixture, but to roll up in dull weather, and to be used only in hot days. A little sunshine in such cold weather as we are enjoying at present will do good instead of harm. Again, some plants require all the sunshine they can get; but as it is necessary to

grow them on the same stage with others that would be injured by it, a compromise must be made.

Plants of Ixoras that were in flower at midwinter, after being cut-back a few weeks ago, are now starting freely; they must be exposed to the light and freely syringed. Stephanotis, Allamandas, and other climbers are now making free growth, and require tying-in to the trellis. Those in pots intended for specimens should not be tied-in closely; the young growths should be tied-out until the flowers are nearly opened, when they should be regularly arranged on the trellis intended for them.

Dendrobiums that flower in the spring and summer months, such as D. Bensoniæ, D. densiflorum, D. Farmeri, D. Dalhousiauum, D. McCarthiæ, and many others, are now throwing out their flower trusses after being kept dry at the roots all the winter. They now require to be well soaked with water at the roots, but not overhead. The water should be warmed by standing in pots close to the hot-water pipes for a few hours. Some of them are very liable to be attacked by red spider, and the young growths are sometimes totally ruined before it is noticed. D. Devonianum is generally attacked first. In the case of this species the best treatment is to syringe the plant every day, or, if this is not convenient, the leaves must be washed with a sponge and soapy water on the first appearance of the spider.

Oncidiums, such as O. ampliatum, O. phymatochilum, &c., that throw-up the flower stems shortly after the pseudo-bulbs are formed, must be watched, as slugs, should any be in the house, have a particular fancy for the young flower spikes as they rise from the base of the bulbs. In the house devoted to cool Orchids it is more necessary to shade from sunshine than it is in the more tropical department. About 45° at night is the temperature maintained at present. The flowers of Odontoglossum crispum had become infested with green fly, and as fumigating is very dangerous they are swept off with a small camel-hair brush. The flowers are also very easily damaged by spotting, but this may be avoided by judicious airing and an atmosphere not saturated with moisture, but only of moderate humidity.—J. Douglas.

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Glasgow.—March 24th, June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.

Jersey.—May 5th, Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.

Bath.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.

Coventry.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.

Durham and Northumberland.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.

Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.

Fareham.—June 23rd. Mr. H Smith Sec.

Exeter (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.

Wisbeach.—June 30th. Mr. C. Parker, Hon. Sec.

Wimbledon.—July 15th and 16th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon. Sec.

Brecon.—July 22nd. Mr. W. J. Roberts, Sec.

Cleckheaton.—July 24th. Mr. S. H. Williamson, Hon. Sec.

Southampton.—July 31st and August 2nd. Mr. C. S. Fuidge, 32, York Street, Lower Avenue, Sec.

TRADE CATALOGUES RECEIVED.

Sutton & Sons, Reading.—*Farmers' Year-Book and Graziers' Manual.*

Ewing & Co., Norwich.—*List of New Roses.*

Downie, & Laird, 17, South Frederick Street, Edinburgh.—*Descriptive List of Garden, Flower, and Agricultural Seeds.*

William Montgomery, 19, Gordon Street, Edinburgh.—*List of Garden Seeds and Bedding Plants.*

TO CORRESPONDENTS.

Advice (*Crito*).—We are much obliged by your suggestions, though we cannot adopt them. We long since concluded that a brother editor was right when he wrote, "Editing a paper is like carrying an umbrella on a windy day. Everybody thinks he could manage it better than the one who has hold of the handle."

Bookseller's Error (*Inquirer*).—You should have returned the book at once and refused to pay for it. Even now, if you have not cut the leaves, and as you told the bookseller of the mistake, if you return the book we think he could not make you pay for it. Think whether it is worth the trouble and annoyance. You have a good book.

Lists of New Plants (*J. F., Haddington*).—There is a list down to 1855 in the second supplement to Loudon's "Encyclopædia of Plants." A list of all new plants of the previous year is published by us annually in Hogg's "Gardeners' Year Book."

Various (*Marley*).—We cannot tell who would purchase the New Zealand Ferns. Write to some of the florists who specially advertise Ferns in our columns. Melon seeds forty years old have been known to germinate, and gardeners think the plants are not so liable to be over-vigorous if the seeds are two or three years old. The seeds of a Composite plant which you enclose may germinate; you can easily try them.

Mildew on Plants (*H. A. P.*).—Dust them and the Vines also with flowers of sulphur; it will kill the fungi and prevent the spores spreading the infection.

Mulch over Rose Roots (*A. D. U.*).—Remove the undecayed straw, fork-in the remainder shallowly, and mulch again in the spring.

Hollyhock Seedlings Diseased (*R. L.*).—It is the "Hollyhock disease." No remedy is known. Cut them down immediately, and sprinkle flowers of sulphur thickly over the stumps and surface of the soil. The experiment is worth trying, as the leaves are only slightly affected. Chloride of lime would kill the plants.

Hollyhock Leaves Diseased (*J. L.*).—They are attacked by the parasitic fungus Puccinia malvacearum; a drawing and description are in our No. 687. No remedy is known, and the best course is to cut down and burn every plant affected, for the spores of the fungus will spread the infection.

Ferns (*A Lover of Ferns*).—In our volumes xxii. to xxvi., both inclusive, are a series of papers on them. If you need a book on the subject you will find full information on the species and culture in our "Fern Manual."

Arum (*J. Wicketts*).—What you call "the White Arum" we suppose is the Richardia æthiopica. One flower being within another is an uncommon sport which most flowers produce occasionally. Your Richardia will not do so again next year.

Humea elegans (*Amateur*).—The proper time to sow the seed is the first week of May in a gentle hotbed. Pot the plants off singly when large enough to handle, and grow them on in a cold frame during the summer. In the autumn remove them to the greenhouse, assigning them a light and airy position.

Deutzia gracilis Unhealthy (*W. S. B.*).—It is likely from the description you give that the plant has received some injury at the neck or collar just above or at its junction with the soil, which has caused the decay of the bark, and prevented sap being transmitted to the shoots and leaves. It will not, we think, recover, but we should keep rather dry, as heavy waterings will only hasten the decay. It may, however, be only the result of a chill, and in that case it will be enfeebled, but will recover.

Celeriac Culture (*Winton*).—Sow the seed in a seed pan early in April, and place in a house with gentle heat, and when up remove to a cold frame and harden off, prick out when the rough leaves are an inch high in good rich soil in an open yet warm situation, and shade from bright sun. Keep the plants well watered, and when large enough plant out in well-manured trenches, putting in the plants in double rows 9 inches apart, and water thoroughly. It does not require to be earthed-up like Celery, but should have a little earth to protect the Turnip-like root from frost. It is useful for soups, and is by some considered a nice addition to salads. In severe weather it should be protected from frost by a covering of litter. The best stewing Celeries are the reds, and good alike for any purpose is Leicester Red.

Destroying Daisies (*J. P.*).—Salt will not destroy Daisies, at least not unless it be applied in such quantity as would also destroy the grass. You may, however, apply this month a dressing of salt at the rate of 20 bushels per acre, which is a preventive of slugs and worms. It will encourage the growth of the grass and kill the moss. The sand will be of no use, but a dressing of short manure or rich compost—if the latter adding to it one-sixth lime—would be highly beneficial. After clearing off the rough particles sow with Grass seeds, not omitting Clovers—Trifolium repens 8 lbs., Trifolium minus 2 lbs. if the land be strong loam, and if light reverse the quantities of the Clovers named. Roll well after sowing. These, however, will not banish the Daisies. The best remedy is to grub-up the roots, employing boys or women, who with knives will grub up a great many in a day; this persisted in is the most certain means of eradicating these pretty weeds.

Gardenia Treatment (*A. D.*).—The plants ought now to have brisk moist heat to start them into bloom and growth, and are the better of bottom heat. They should be moderately watered at first, but kept moist, increasing the supply as the buds swell. When the plants have done blooming cut-in any straggling growths if it be required, and sprinkle with water overhead, repotting if necessary, and by a moist and brisk heat encourage growth. When that is complete gradually withdraw from the bottom heat, keep drier and cooler, and in autumn and winter give water only to keep the leaves fresh. If the plants are sickly from a sodden sour soil repot at once, providing good drainage, plunge in bottom heat, and water carefully until the roots are working freely in the fresh soil, then water more copiously.

Plants for the Back Wall of Vineries (*Mr. John Kelly*).—Camellias, also Orange, with its allies the Citrus family, are good. Both may be planted 12 feet apart, but it will be a number of years before they meet unless you can put out large plants. Lucelia gratissima is also a fine plant for a wall, and one of the best flowers for cutting in autumn and early winter. If the plants are small they ought to be planted at half the distance apart.

Vines Bleeding (*Idem*).—Dry the cuts with a hot iron, and at once dress with Thomson's styptic or the patent knotting used by painters. The temperature you name will not stop the bleeding now it has begun.

Lily of Valley (*Idem*).—Flowers without leaves is the result of being brought on too quickly by high temperature and the plants not being sufficiently near the glass. They are, however, subject to this when forced early, and more so this year than usual, probably by the drought of last year ripening the crowns more thoroughly and developing the flower buds to a higher degree than when the season is more moist. Mr. Bull of King's Road, Chelsea, as well as Mr. Linden, deals in economic plants.

Potato for Main Crop (*Portcullis*). — For your purpose we advise Walker's Regent. You will require about three bushels. It is a heavy cropper, a capital keeper, and of excellent quality. It will not, however, be in use until September; you will therefore require a few earlies and second early, about half a bushel of each. The early may be Myatt's Prolific, the second early Lapstone. The early may be in rows 2 feet apart, and 1 foot asunder in the rows; the second early 2 feet 3 inches, and 15 inches; and the main crop 2 feet 6 inches, and 18 inches in the rows. The seed would be most economically purchased of some neighbouring grower.

Sweet Williams (*Idem*).—It is a good time to plant nice plants with good balls for this year's flowering, but seed sown now would not flower this year. The first week in April is a proper time to sow Sweet Peas and Mignonette.

Thorn and Privet Hedge (*J. R. W.*).—The Privet would overgrow the Thorns or quicks, and it would not as a fence against cattle be so good as a quickset hedge only, though from its evergreen character is preferable as a shelter for gardens. To give a semi-evergreen character to the hedge you

may plant a common Holly along with the Thorns one in every yard, it being much better as a fence plant than Privet, which is too weak for resisting cattle; but nothing can be better than a good quickset hedge.

ALLAMANDA SCHOTTI (*Amateur*).—The treatment to which the plants have been subjected is proper, providing they have not been kept so dry in winter as to cause the wood to shrivel. If the wood be plump and sound you may safely purchase the plants.

ECONOMISING OLD LIGHTS (*Amateur Vinedresser*).—Cool vineries ought to have a south aspect; an east one would not, we fear, receive the requisite solar heat nor retain it so as to ensure the ripening of the fruit. It would answer better as an orchard house than as a house for Vines. The lean-to would be the best form of house. We should plant the Vines in front, and run up each Vine with four rods at about 3 feet distance apart. Chasselas Vibert (white), Esperione (black), and Cambridge Botanic Garden (black) are the most likely kinds to succeed in such a house. We do not, however, advise them, but instead we should form of the lights an orchard house, having the lights fixed perpendicularly at 7 feet distance from the wall, having about 18 inches of boarding at bottom, one half of it to open for ventilation, and an entirely new roof. By having this fixed beneath the coping of the wall you will have about 2 feet 6 inches of fall in the 7 feet of width. A row of bushes and pyramids in front and the walk at back will leave the wall available for fruit trees, and suitable for Peach, Nectarine, or Apricot. The front will be admirably suited for Plums, Cherries, and Pears.

FOREMAN'S QUERIES (*S. H. G.*).—You cannot do better than write to the gardener. You are certain to receive a courteous reply, and the information will be authentic.

NAMES OF PLANTS (*J. W.*).—1, Woodwardia radicans; 2, Aspidium angulare; 3, A. coriaceum (capense, *Willd.*). (*Dollond*).—Pomaderris elliptica. (*Wm. Hodgson*).—Specimens insufficient. (*J. F., Teddington*).—1, Nothochlæna sulphurea; 2, Pteris longifolia; 3, Adiantum hispidulum; 6, A. formosum; 4, Pellæa hastata; 5, Asplenium viviparum. (*Juvenile*).—1, Adiantum hispidulum; 2, Asplenium fontanum; 3, Aspidium lobatum.

POULTRY, BEE, AND PIGEON CHRONICLE.

THE EXHIBITION DORKING.—No. 11.

BY T. C. BURNELL.

THE DARK DORKING HEN should be similar in shape to the cock, with a square, broad, and lengthy body set on short legs. The comb, if single, should be large and falling to one side, a small upright comb being a great eyesore. By some it was thought impossible to breed cocks with upright combs from hens whose combs fell over, but this fallacy was contradicted by Mr. Hewitt in the *Journal of Horticulture* for June, 1867, and I copy his notes, which will be interesting and instructive to many. Mr. Hewitt says:—"In giving my opinion as to the formation of the comb of a Grey Dorking hen, I quite agree that the comb should be of moderate size, well serrated, and hanging over the face on one side. The theory propounded of breeding from what is commonly known as a 'prick-combed' Grey Dorking hen has been again and again attempted, but I never yet knew a single individual who persisted in the experiment a second year, for disappointment was the invariable issue, and the chickens thus produced proved utterly useless for exhibition. Anyone purposing to breed Dorkings I would strongly advise to mate together a cock having a perfectly upright comb with hens whose combs fold and then turn over the face, it matters not on which side. He will then find, if well-bred stock birds, that all his chickens will have combs exactly of the same formation as the parent birds. In Spanish fowls the same rule again holds good. It is only great age or want of health and condition that will cause the combs of either Spanish or Dorking cocks to fall over if they are truly-bred birds. In the latter case it very frequently happens that restored constitution causes the comb to become again as exact and firmly fixed as ever. The different formation of the comb is in the breeds referred to simply characteristic of sex, as in the mane of a lion or the antlers of a buck."

As regards the colour of a Dark Dorking hen a good deal of latitude is allowed, provided the general appearance of the bird is of a rich dark colour. Whatever a few may say to the contrary, it is impossible to ignore the fact that the old Brown and Light Grey birds do not now meet with favour either from judges or exhibitors, partly owing to the fact that the Dark hens handle the best from being more tightly feathered, and partly because they present a more attractive appearance to the eye. My taste inclines in the hen to a jet-black neck hackle and tail, the back and wings being of a dark grey colour, and each feather spangled at the ends with a darker marking, the shaft of each feather being distinctly white.

This latter feature is invariably found in all good Dorking hens, and adds very much to the general appearance by contrasting with the dark feathers. With a black hackle I like to see a salmon-coloured breast, but the hackle is often striped with white, and the breast colour may be of any tinge from light salmon to dark chocolate, as long as it does not present a washed-out appearance.

Colour is far more difficult to obtain than size. The latter may be obtained by good and judicious feeding and breeding from large-sized birds not too nearly related; but nothing will bring colour unless it is in the strain. Beginners are apt to think that all they have to do is to buy a couple of good hens and a highly-commended cockerel at a large show, and to breed from them, but this will nine times out of ten end in failure unless the cock comes from a good strain; as, no matter how dark and good the hens are, if the cock be not also bred from dark-coloured birds it is impossible to say what the chickens will turn out. Before buying a cockerel to breed from I like to see what the stock hens of the yard are like. It is very bad policy to take the show birds as a sample, as these have very likely been bred by someone else. Though the darker-coloured cocks as a rule are most likely to breed dark chickens, this is by no means a certainty, and we shall never know what our chickens are to be like unless we know for certain that the cock comes of a good strain.

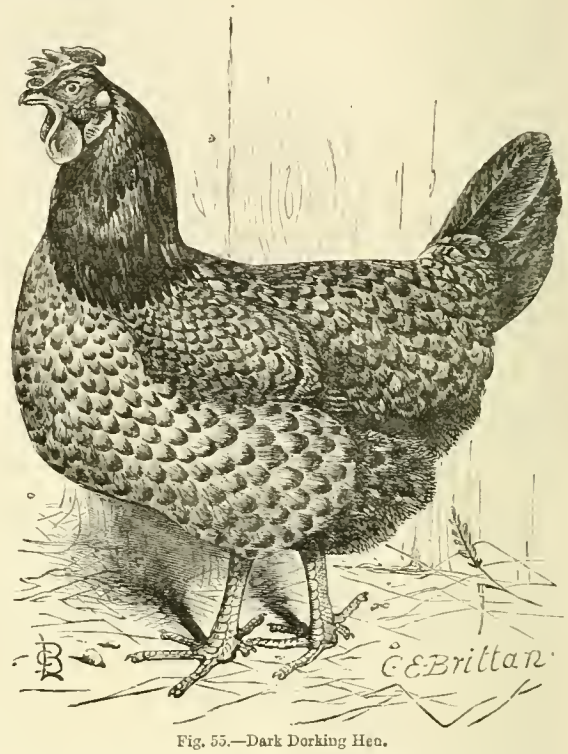


Fig. 55.—Dark Dorking Hen.

The principal defects to avoid in a Dark Dorking hen, in addition to what I have alluded to when speaking of the cock, are upright comb and "sooty" feet, the latter being much commoner in the hens than in the cocks, as also are white earlobes. A red or rusty colour on the wings is also to be avoided.

Dorking eggs are white and unusually large. The chickens when hatched are very pretty, and should be uniform in appearance, with a broad dark band down the centre of the back, and with two narrow white stripes on each side of it. As a rule the little chickens with the broad band of colour down the back of a sound dark tinge are more likely to make dark chickens; and even from the very best birds it will be futile to expect more than two or three in a brood to reach the required standard of shape, size, comb, colour, and feet, while not one bird in a thousand is perfect in every respect.

The best of rearing a number of Dorking chickens is, that the "wasters"—birds which can never pass muster—are at the very best for the table when at about ten weeks old, and should then weigh from 2½ to 3 lbs. each. I constantly weigh my chickens, and find that cockerels at two months old should weigh from 2¼ to 2½ lbs. if they are ever to be the heroes of a show pen. At four and a half months old 7 lbs. is a fair weight, and at six months many weigh 9 lbs., and some 10 lbs. Old cocks will weigh from 9½ to 14 lbs., and hens from 8 lbs. to 11 lbs. I of course allude to show specimens; but a cock weighing 10 lbs., if dark and perfect, is likely to win many prizes, as is a hen of 8½ lbs. These weights are mentioned only for the sake of comparison, and birds may generally be made 2 or 3 lbs. heavier by fattening; but this would be worse than useless, as birds now are never weighed, and it is frame and bone which carry the day.

It is impossible to give a standard of points of any real use, as judges will always differ as to the amount to be allowed for condition, nor will they agree as to the relative value of shape, size, and colour; but the following scale gives my own idea on the subject. Allowing one hundred marks for a bird perfect in

size and every fancy point, I would deduct the following marks for the following defects :—

Want of shape	from	5	to 25	points
Want of size	,,	5	25	,,
Bad colour	,,	5	15	,,
Badly-formed feet and toes	,,	2	15	,,
Defective comb in hen	,,	1	5	,,
Defective comb in cock	,,	2	10	,,
Sooty feet	,,	2	15	,,
Slight bumble foot	,,	10	20	,,
Spur outside (cock)	,,	15	20	,,
Absence of white shaft from the hen's feathers	,,	5	10	,,
Want of condition	,,	15	25	,,
White earlobe	,,	1	3	,,

All deformities, bad bumble feet, spurs right outside, and very dark feet are fatal disqualifications, and I think badly-crooked breastbones should be so too.

HOUDANS.

Like "D., *Deal*," I am exceedingly disappointed with my Houdans as regards laying, although in other respects they far exceed other breeds except the Crêve and Dorking, and they surpass them in hardiness.

Having read in your Journal of the excellent laying properties of these birds, I determined to obtain a yard of them, and procured four Houdan hens with a cock (not related) in January 1874. From these I reared twenty-nine pullets, all of which are now above ten months old; with these pullets I put six cross-bred hens in order to have in the yard exactly the same number of hens as I had last year, which consisted of thirty-five farm-yard hens.

Last year's result from thirty-five crossbred fowls during the months of January and February (nine months old) was 621 eggs. This year's ditto (ten months old) Houdans, 301 eggs. The eggs I now obtain from this yard are half of them from the crossbred hens; their eggs being easily distinguished by their brown tint.

Besides the Houdan yard I have one of Light Brahmas (nine hens and a cock), these have laid this year 307 eggs. I have another yard of Black Red Game, twenty-three pullets which have laid since Christmas 421 eggs; also I have three Black Hamburgh pullets, which have laid this year 103 eggs.—J. Shelswell, *Banbury*.

THE ENGLISH OWL PIGEON.

I find, after reading "Wiltshire Rector's" remarks on this Pigeon, I must add something lest I be misunderstood. The Rector's analogy as to the African being to the English Owl as the Short-faced Almond is to the well-bred flying Tumbler will not, in my opinion, hold good. Flying Tumblers are fancied and bred for their performances in the air, and he who will have them nearest perfection must not be too particular about feather or appearance. Short-faces, on the other hand, though undoubtedly bred down from common Tumblers, are bred entirely for appearance and fancy points. If the Rector's analogy is good, then English Owls, like those of the present day or similar birds, are the progenitors of the fine Africans now imported. From this idea I must dissent, and rather hold with "Bubo" that the English bird has degenerated in English hands from unskilful breeding.

To the proof of my assertion I first mention the article on the Owl in the Treatise on Pigeons (1765):. "The Owl is, according to Mr. Moore, a small Pigeon very little larger than a Jacobin, which might be their size in his time; but at present they are brought to such perfection that they are hardly if anything larger than a very small Tumbler. Its beak is very short, and hooked over at the end like an Owl's, from whence it takes its name; the shorter it is the better. It has a very round button head."

If a fine African Owl and what is reckoned a fine English one (such as comes to the front at the best shows) is taken up and compared with this description written in 1765, I hold it will not apply to the English bird at all, but eminently to the African. Leaving out mere size, there is little left but the frill or purle to indicate what the English bird is. Some of the crossed dusky-coloured birds have certainly fair heads, but can a real powder-blue English Owl be produced with the formation of head and beak as described in the foregoing quotation? If it can, then I will allow it to be an Owl, although double the size of the African. At the same time it is clear that the size is a sign of coarseness, and that altogether the breed has lost that finish so well described by the writer of the Treatise (1765).

Returning to the Rector's analogy of Short-faces to African Owls. The former if very fine could not be trusted to fly, leaving out the risk of loss, because they are not able; while, on the other hand, the African bird has his wings clipped up, and is as smart on the wing as his English very distant relation, which I have proved.

When in India I had a very fine pair which I had from Mr. Jamrach, who brought them out on one of his expeditions in search of tigers. He had them from Messrs. Baily, the importers. The climate, being something like their native one, suited them so well that they bred as freely as common Pigeons, and so true to points that I was convinced the breed is a well-established one, not like the English Owls that I had beside them, and from fair-headed specimens of which the greater number came very mousey-faced.

As I said before, the English bird is worth preserving for colour's sake, in the hope that that may be engrafted on the finer bird; but he is not in my opinion worth preserving for anything else, having evidently had the bar sinister engraved on his escutcheon some time between 1765 and now; at least I judge so when I read what he was and look at what he is.—J. C. Lyell, *Monifieth, Dundee*.

CLASSES FOR THE MEALY POUTER.

The prevailing colours of semi-wild Pigeons inhabiting field dovecotes and ruined buildings in this country and the continent of Europe, also the Hindoo temples and mosques of Hindostan, are blue with black bars, and blue-chequer. Amongst all these it is no unfrequent thing to observe some mealy and red-chequered birds. These latter colours, then, seem the first variation nature makes in half-domesticated Pigeons, and next an occasional albino or pure white. It is therefore owing to the fact that they are the most natural, that Pouters of these colours have always been perhaps hardier and generally finer developed as to style and size than the artificial black, red, and yellow. I think late writers are agreed that blue and mealy do not give the breeder one tithe of the trouble as to colour that the artificial colours do.

On going back to the earlier writers, I find Moore places the black before the blue, and the yellow before either. Thirty years later the writer of the Treatise (1765) values them in the same way, and places red between black and yellow.

Circumstances may alter cases, as for instance at the present time reds of the best tint are so scarce that they are more valuable than yellows, birds of which are still to be met with of very good colour though also scarce. Yet I think we may take for granted the respective values placed on the colours by the old writers, and we shall, no doubt, find when reds of colour become more common that the difficulty of keeping to the right tints will make the colours stand—first, yellow; second, red; third, black; fourth, blue. After these the only others worth breeding for themselves are the barred colours—viz., silver, yellow mealy, and the common or red mealy. Both as regards beauty and from the fact that silver and yellow mealy are scarce and artificial colours, they would in my opinion stand far before the common or red mealy if they could be produced equal in Pouter points with it. Whether they ever will be bred so is another question. I therefore put—fifth, silver; sixth, yellow mealy; seventh, red mealy. After these there remain blue, red, and yellow chequers of various shades, sandies of the same, dun and dun chequers (colours I never saw, though I believe they have existed), Splashes all the way from those with only a grizzled tail to half-coloured or badly pied birds, and last pure whites, which should in my opinion come eighth on the list; for should any of the seven colours I have numbered be not only equal in style and size to a white, but well marked besides, it is a more valuable bird.

Here, then, is what I would consider a good schedule for a Pouter show, the sub-divisions into classes of cocks and hens, old and young birds, being made according to circumstances. First, yellow; second, red; third, black; fourth, blue; fifth, silver and mealy (yellow or red). Of course the red mealy has the best chance here, yet yellow mealies have been bred very fine; sixth, white; seventh, any other colour to include dun, sandy, chequers (blue, red, yellow, or dun), and Splashes with not more colour than a marked tail, and ticked about the head and neck.

The attempt on the part of some to wipe out and utterly ignore at shows some of the off-colours found in Pouter Pigeons will never succeed. At the same time is there not a danger of carrying the recognition of them too far? as for example at the last Kilmarnock Show, where I find the following extraordinary classification :—First, blue or black; second, red, yellow, or mealy; third, any other colour. I understand from this that reds and yellows to beat mealies must be at least as good in the first four Pouter properties. Where are such reds and yellows to be had? Without particularising birds it is well known that there have been, and perhaps yet are, mealies so fine that no black, red, or yellow could stand a chance with them. The only fair schedule where there were only three classes would be—first, yellow, red, or black; second, blue, silver, or mealies; third, any other colour. Perhaps it is the idea of some who have waded through the late Pouter controversy that those who took the part of the off-colours have plenty of them and produce many. Out of thirty birds I have only two off-colours, and no fancier I know has a greater proportion, but some have less. They are used according as they are bred. In the hands of

their owners they are of great value, while in the hands of others who did not know their breeding they might be of as great loss if wrongly matched. Success in breeding depends on the knowledge of how all one's stock is bred.

In conclusion, I do not believe that the late Pouter controversy has done anything to alter the position of off-coloured Pouters in the least. I believe those who wrote most against them know their value, and would give as much for good specimens, and perhaps more, as those who sided in their favour. Old Moore says, "The plumage of the Pouter affords a very great variety. The pieds are most universally esteemed. Under these may be ranked" (for mark, there were other colours) "the blue, black, red and yellow pied."—J. C. LYELL, *Monifieth by Dundee.*

In the pages of a contemporary I was surprised to see a letter from Mr. Wallace of Glasgow, in which he uses very tall language about a mere nothing. He says, "To Mr. Huie's assertion I give the most unqualified contradiction. Neither he nor Mr. Ure were ever members of the North British Columbarian Society." I feel it to be my duty to remind Mr. Wallace that the North British Columbarian consists of the mere remains of (with a few honorary names added) a Society of which Mr. Huie was one of the original founders, and no member did more to establish the reputation of that Society than he did, the name of which has been of late years only altered to "The North British Columbarian." I know that Mr. Huie wrote articles for three of the Glasgow daily newspapers when connected with that Society, which was the means of bringing out the public to a large extent to its exhibitions, and placing it on a footing of respectability, which Pigeon shows in Glasgow had never before enjoyed; and I do think Mr. Wallace acts a small part in making use as he does of the mere change of the name of a Society of which the mainsprings are now gone.

The editorial note following the letter in question is behind the times. It is certain that Mr. Huie and Mr. Ure advocated the Mealy Pouter and bred them to perfection many years before your contemporary was dreamt of, and for aught that I know years before its editor saw the light of day.—JAMES BRUCE, *Dunfermline.*

NORTHAMPTON SHOW OF POULTRY, &c.

WE have received another report of this Show, from which we extract the following:—

RABBITS.—The Lops in the Self-coloured class were not numerous, but good, and one pen empty. The first was a Fawn doe, very good in all properties, 21¼ inches by 4⅝ in ear. Second was a Black buck, partially moulted, small in eye, but good in all other points: ear, 21¾ inches by 4⅞. Third was a Silver Fawn buck, 21½ inches by 4¼. Lops, Broken-coloured, was a good class and the competition close. First was a Black-and-white doe, perfect in style, marking, and eye; ear, 22 inches by 4¾; rather small in size. Second, a Tortoiseshell doe, not a good colour, but right in all other respects, 22½ inches by 4¾. Third, a Black-and-white buck, a little short of marking, very grand style and carriage, good eye; 21½ inches by 4⅞. Pen 1214, very highly commended, Black-and-white, too gay in colour; 21¾ inches by 4⅞. 1208, Fawn-and-white, very highly commended; 20 inches by 4½. 1212, a good Rabbit in all respects, and would have been first, but one leg was crooked. Angoras were a very good class. Mr. Swetman's very large doe first. Second, a smaller Rabbit, but very fine in wool, and with such ears for shortness and shape as we have not seen in the show pen before, and it is quite a moot point with us as to whether this Rabbit's fine qualities should not have been placed before mere size, other points being equal. The third, from Mr. Swetman, was also large and good. Mr. Thompson's highly-commended buck also a near run. Himalayans formed a large class, but, as a whole, nothing out of the common, although there were some really good specimens, as the one shown by Mr. Mason; the second, which was small and young; and Mr. Pickworth's buck. Dutch were not good, and the first award was to a very young Rabbit grey in colour but perfectly marked if we except that the line in front did not extend through the ears; the second and third, adult, Blue, and good. Silver-Greys were *the* class of the Show—such a class, in fact, as we have never seen equalled, and every pen mentioned separately; six being selected as the recipients of the prizes, were taken out and placed in separate pens in an equal light, the remainder, as a rule, losing only in the extremities being a little too dark, the heads especially. Of the above-named six the first was one of the most equal Rabbits we have ever seen, the feet, nose, and especially the ears, being exactly like the body, and the surface silvering of the most correct shade, and neither mossed nor mealy. Second was a large Rabbit, perhaps the largest in the Show, but rather gaunt-looking, showing want of condition, and not of the same nor as correct a shade of silvering. Third a little smaller than above with grand body colour, but not as light on feet, nose, and ears as on body, but the next best in silvering. Fourth not as good in silvering, and rather darker on feet and nose; and pen 1260 close upon the last-named.

From the above remarks it will be seen that evenness and silvering take the lead over sheer size, which agrees with our opinion from long experience; colour, as in the Silver-Grey Dorking, being far ahead of size, although the latter is a very desirable property as enhancing the value of the skin.

In the Variety class Belgian Hares won the prizes, the winners being quite clear of the rest, most of the others being good in fore quarters, but only a common wild-rabbit colour on the hind quarters.

In the Selling class for any breed, Lops excepted, the first was a better Belgian Hare doe than the first-prize winner in the above class; the second a fair Silver-Grey, and third a Black-and-white Dutch. In Selling class for Lops the first was a Fawn-and-white buck, 21 inches by 4½; second, Black-and-white, 20 inches by 4¼; third, Fawn, 20 inches by 4⅜. In the Local class was first a Fawn buck, 21½ inches by 4⅞; second Angora, and third Dutch.

Mr. Hutton judged the Rabbits and Pouter Pigeons.

CRYSTAL PALACE BIRD SHOW.—No. 2.

DELIGHTFUL as were the Canaries, equally so were the Mules and those birds in the other portion of the Exhibition. I always had a very great fancy for Mule birds, and my curiosity was much appeased after going through them and admiring the beauty and respective qualifications of the prize-winners. There is something exceedingly smart and aristocratic about Mule birds, more particularly in those bred betwixt Goldfinches and Canaries. One cannot fail to become ardent admirers of them, close as they are in plumage, and so very vivacious and amusing in their ways compared to Canaries. Some were faultlessly marked and pencilled about their eyes and smaller flights, and others nearly clear, throwing up that splendid Goldfinch flush around their faces and on their wing-bars and breasts, that each bird with its delicate lovely garb and ancestral form brought to mind the words of our poet laureate—

"Half is his, and half is thine; it will be worthy of the two."

Mr. James Doel of Stonehouse, Plymouth, was the fortunate possessor of many of the prizetakers, he having won ten prizes out of the eighteen the Judges awarded, thus becoming the winner of the silver cup offered (in classes 30 to 33 inclusive), to the exhibitor gaining the greatest number of points. Mr. Doel took first and second and extra third in three of the classes (30, 31, and 32), and first, third, and extra third in class 33. The whole of his birds were in fine condition, and were sent to the Show wonderfully clean considering the distance they had travelled. In class 30 Mr. Hawman's Evenly-marked Yellow played a good third to Mr. Doel's pair. In classes 31 and 32 the chief competitors to Mr. Doel were Messrs. Bunting, Stevens, Caplin, and Tomlin. Class 33, which was justly specified a "very good class," contained some birds very nearly clear. Had they been clear it was stated that special prizes would be awarded, but they were not, and so they had to go without. The two nearest approaching to clear were those numbered 776 and 778, exhibited by the Messrs. E. & J. Baxter and Mr. S. Bunting, the former exhibitors' specimens being marked very distinctly but slightly about each eye, and the other slightly grizzled upon one of the flight feathers: two superb birds. By some slight error the equal second-prize ticket was placed upon Mr. Boatwright's cage instead of Mr. Bunting's. This, however, was rectified during the second day of the Show.

The Mules were continued with a couple of classes for Dark Mules (Jonque and Mealy), a class for Linnet Mules, and one for Any other variety of Canary Mule. In these four classes there were sixty specimens, but the more interesting ones were those exhibited in classes 36 and 37. The Dark Jonques must have been a troublesome lot, for I could not see very much difference betwixt the first three or four birds, still I think Mr. Hawman's bird was rightly placed. In the Mealy class Mr. Cox won first with a fine-made bird full of quality, Messrs. Bunting and Moore & Wynn following well up with birds far beyond a middling quality. Mr. Spence took first and second for Linnet Mules, Mr. Stevens being third. I have seen a better class than this, the birds not being quite up to my expectations. In class 37 Mr. Hawman's Greenfinch and Canary Mule appeared to be at home; it is a fine bird and will take a lot of beating. Mr. Alwin's second-prize bird was in good plumage; and the third prize, a very prettily pied Siskin and Canary Mule, was won by the Messrs. Baxter.

Betwixt the Mule classes and British birds the cages of sixes were shown. Eight sixes of Norwich of varied sorts were entered, the best of the lot being the six in spanking plumage exhibited by Mrs. Maria Judd of Newington Causeway. Messrs. Mackley, Norwich, were second, third, and extra third—three good lots. There were but three Lizard sixes, and not much difference betwixt either. First was given to 849 (Fairbrass); second Bunting, and third Cleminson & Ellerton. The sixes for Goldfinch and Canary Mules only reached two entries, and one prize only was given, that to Mr. Doel's cage, which contained half a dozen birds fit to compete with singly.

Class 41, Miscellaneous, for any other variety of Finch Mules. In this class several entries were made in error—namely, a Black Mule, a couple between Siskin and Canary, Linnet and Green bird, and five Cinnamon Mules. The class was judged as they stood, and a second prize was given to Mr. Doel's Black Mule, but another exhibitor raising an objection the bird was withdrawn. The first prize was awarded to Mr. John Brown's Bullfinch and Goldfinch cross, a bonny specimen. The appearance of several of the cages in this class was somewhat marred through being partly covered with printed papers denoting the respective breeds of the occupants. Why they should have been made so conspicuous I am at a loss to know. The particulars in the catalogue ought to have sufficed.

The classes for British birds were well supported. Bullfinches numbered thirty-one, Goldfinches forty-nine, Chaffinches ten, Linnets eleven, Redpoles and Siskins eight, Skylarks sixteen, Robins thirteen, Thrushes twelve, Starlings nine, one Magpie, one Jay, three Jackdaws, and nineteen of various other breeds in class 55. Those of especial merit were Major Edwards's Bullfinch; Messrs. Doel's and Hawman's Goldfinches, the former in particular an exceptional good one; Mr. T. Alwin's Chaffinch; Messrs. Cannon's and Cleminson & Ellerton's Brown Linnets; Mr. Newmarch's Siskin; Mrs. Judd's Skylark; Mr. Cox's Robin; Mr. R. J. Troake's Blackbird; Mr. Newbold's famous Thrush (one of the best plumed in the British classes), and Miss Emma Hawkins's two very learned Starlings, one of which was stated to whistle an air from "Madame Angot."

In class 55—Any other variety of British birds—a White Goldfinch belonging to Mr. Allcorn, headed the lot for honours which were freely given. Miss Norah Mohr and Mr. John Young had equal firsts awarded, the former two prizes for a couple of pairs of smart Bearded Tits, and a cage containing a Grey or Dun Wagtail Blue. Mr. Young's equal first was won with a very good feathered Nuthatch.

Birds of Passage formed three classes, half a dozen Blackcaps making up the class, Mr. C. Varetti being the winner of first and second prizes. There were six Nightingales, Mr. O. A. Watts being foremost with an interesting bird, which occasionally treated the visitors with its vocal power. The other class was represented with a Cuckoo, a Titlark, a Yellow Wagtail, and a lesser Whitethroat. Mr. Tilney's Wagtail was to the front; Mr. Walker's Titmouse and Mr. Watts's Whitethroat equal seconds.

Foreign birds were likewise numerous, and besides those entered in the classes was a splendid collection exhibited by A. F. Wiener, Esq., Belle Vue House, Herne Hill, Dulwich, comprising thirty-one birds of various breeds. Although not for sale or competition they did not escape the notice of the Judges. Altogether there were eighteen classes for Foreign birds, and there were 147 entries, consisting of Widah Birds, Red-headed Cardinals, Virginian Nightingales, Waxbills, Java Sparrows, Diamond Sparrows, Doves, Love Birds, Parakeets, Cockateals, Parrots, and Cockatoos of various kinds, besides a large entry in the last class for Foreign birds of any other variety, "too numerous to particularise," as an auctioneer would say.

The Selling class and the class for exhibition cages terminated by far the finest show of Cage Birds ever held.—An Eye-witness.

SQUIRRELS ARE EGG-SUCKERS.

In your notice to correspondents, page 206, you write, "Squirrels do not suck Rooks' or Partridges' eggs." Perhaps not; I do not know, but I do know that they suck Woodpigeons' eggs, having seen them do it. I was induced to watch by finding frequently at the foot of fir trees on which the Woodpigeons nested egg shells empty, with au opening on the side about the size of a shilling, jagged as if made by the teeth of some rodent.—R. F. F.

Bath and West of England Society and Southern Counties Association.—Croydon Meeting, 1875.—The General Post-office will extend the telegraph wires to the Show Ground, and make such other arrangements as may be desirable. For the Meeting of 1876 the Council have accepted the Hereford invitation.

LIGURIAN AND COMMON BEES.

Some fourteen days ago the desirability of having a public trial of strength between Ligurian and common bees was suggested. It was hoped that some one would propose a few simple rules and regulations to be observed in a trial of this kind. I now venture to state what I think would be a fair and satisfactory way of testing whether Ligurians are in any sense better than common bees. Five swarms of each sort, all equal in weight, say 5 lbs. each swarm, put into hives alike in size and materials, placed in one garden at the same time, and remain together till examined and weighed by the judges. Of course the hives would be placed under the care of an honourable person, and never be visited by their owners. If a more satisfactory trial can be suggested I shall be very glad.

Thomas Bagshaw, Esq., of Langnor, called here the other day, and as he is a young, energetic, and intelligent apiarian, and better able than myself to undertake the activities of the proposed contest, I am glad to say that he is ready to make arrangements for a public trial. His bees are the common sort, and if he has not swarms enough at the time that may be fixed on I will gladly lend him some of mine.

I shall be gratified if any gentleman, or number of gentlemen jointly, will arrange to produce five swarms of Ligurians wherewith to enter the arena to meet those of Mr. Bagshaw. If five swarms of hybrids be entered as well the experiment would have a wider sweep and be much more important. Shall we not indulge the hope that the admirers and patrons of Ligurian bees will now embrace this opportunity of proving the truth of their assertions as to the superiority of their favourites?

If the projected trial establish or prove the superiority of Ligurians all right-minded apiarians will encourage their propagation and sale all over the country; and if they are not better in any sense poor people will be instructed not to expect greater results from Ligurians than are realised by common bees. In such a contest there is nothing to fear. Though I believe now that the common bees are inferior to none in their breeding and working powers, I shall be delighted to see them fairly beaten.

If a contest cannot be arranged without stakes and prizes, let me say that, if any of the patrons of Ligurians will intimate their willingness to enter the arena of contest on condition that a handsome prize be given to the winner, the best shall be done to raise subscriptions to cover a fair share of the prize-money.

If our friends wish to convince the bee-keepers of Great Britian that the common bees are inferior to theirs, they have now an opportunity offered to them of doing so. And if they come forward in an honest manly way to have this matter settled, they will do something to advance apiarian science and benefit the bee-loving community.—A. Pettigrew.

A VISIT TO HANWELL.

Not to the Asylum, although some would perhaps say I was mad enough over flowers to be qualified for it; not to the Central Schools, although I did go there, and should be quite prepared to take the defendant's side in "Senior *v.* Tufnell;" but to the Editor of the "Bee Journal," the well-known Hanwell beemaster, Mr. Charles Abbott: for amongst my cultures I have for many years, in a bungling sort of way, kept the little busy things. But I have been very much dissatisfied with my keeping. I had built a bee house, into which the wax moth had come and destroyed two of my best hives, and which I had demolished accordingly. I have long thought that if I kept bees at all it should be in not quite so unscientific a way as I had done; and this feeling was intensified by seeing the wonderful Exhibition at the Crystal Palace last year, and hearing, and indeed beholding, the amazing results produced by bee-keepers in various parts of the kingdom, more especially in Scotland. And so, as business led me to Hanwell, I determined to utilise the visit for this purpose; and having corresponded with Mr. Abbott felt sure, from the tone of his letters, that I should be received with courtesy and initiated into everything that I as a novice might require information upon. There were some three or four things I wished to get evidence upon:—1st, What sort of hives were the best, wood or straw; 2nd, whether the use of the quilt was advisable or not; and 3rd, the value or otherwise of the Ligurian bees.

I found, as I have often done with the most successful growers of flowers, that the place where Mr. Abbott "cultivates" his favourites was not at all a likely place to look for them. There was no fine and open space, no fragrant dell or brilliant parterre, but I turned into a small cottage yard in the street of the long straggling village of Hanwell; and there, in a small square back garden, were in all directions hives of all sorts, and here have the experiments been made which have been recorded in the "Bee Journal," and which, while they have produced so much controversy, have also led to such good practical results.

And now as to the question of hives. Of course now-a-days nothing but bar hives will do; but the question is, What sort of bar hives shall they be—of straw or wood? and if of wood which is the best? The wooden bar hives are all more or less a modification of the old Woodbury hive; and as I am not inviting a buzz about my ears, and probably a sting or two into the bargain—(for writers on bees seem sometimes as if they had stolen some of the poison bags of their little pets and dipped their pens in them)—by disparaging this or that hive, I am only going to say what I saw that pleased me. There was first of all the wonderfully cheap Woodbury that gained the prize at the Crystal Palace, and which is made for 3*s.*: this ought to be largely used for the purpose of trying to induce our cottagers to give up their barbarous practice of destroying the bees. Then there was Mr. Abbott's own hive, which struck me as being a most admirable one, and which is made for 25*s.* complete, or with some further improvements for 35*s.* This hive seems to me to have all the advantages of a Woodbury, and to be superior to it in some

points which it will hardly be necessary for me to enter upon here. So bigbly did I think of it that I am going to have one for my new start in bees this year.

And now as to the quilt. I have seen some very hard things said against it, while others have been equally loud in its praise. Now I examined several hives here, and I saw no trace whatever of the damp which is said to be engendered by it. The corners of the hives were perfectly dry, and there if anywhere damp would collect. I had, too, an opportunity of contrasting it with the ordinary board covering. A hive had been sent to Mr. Abbott in which the combs were all crooked, and which he was going to straighten. This had not been opened; and so, as there was a gleam of sunshine, he opened it in my presence. A great deal of damp had collected on the floorboard and on the crowns: so that on this point, therefore, I was quite satisfied. And then in the facility which it affords for examining the bees I think there is a great advantage: there is no unscrewing of boards, but by just simply lifting up the piece of carpet you have a complete command of the hive. So here again my visit had the effect of determining me to adopt the quilt—which, by-the-by, is a queer name to give it, for it is in reality simply a tidy square of carpet. You can of course put anything else on this for warmth, and either cover with a board or the old cottagers' plan of an inverted pan.

And now with regard to Ligurians. It would ill become one who is a novice to enter into any dispute on this point, or to decide between Mr. Pettigrew, who I see has strongly decried them, and others who approve of them; and yet I gather from his letter that greater results have been obtained from them than from the Britishers. There is one advantage they possess—they are so much more gentle, and to timid bee-keepers this is an advantage not to be despised; and from what I could see with Mr. Abbott I should decidedly give a vote in their favour. They are also very pretty, but I do not think my decision was influenced by the "prisoner at the bar being of a very prepossessing appearance."

There is no doubt that bee-keeping is entering on a new phase in England. We have had stores which we have wasted, and continued practices which are barbarous and wasteful; but care must be taken that we do not go to the other extreme by over-refinement. Bee palaces such as I saw at the Crystal Palace are, I think, abominations; and if this is avoided and a kindly and teaching spirit manifested by those who are adepts, I am sure great benefit to the community at large will be the result, and amongst those who are helping to this end we may safely reckon Mr. Abbott and his "Bee Journal."—D., *Deal.*

OUR LETTER BOX.

Chickens Weak (*Miss Evelyn*).—Breed, food, and their day home should all tend to make your chickens strong; but your arrangement for them at night is a very bad one. Young chickens should never be on straw. Nothing could be better than the dry earth of the barn floor and an old sack thrown over the coop. The chickens of the cross grow very fast—indeed often too fast for their strength, and then appears the leg-weakness you mention, which can only be cured by a good diet of easily digested natural food. We should for young chickens feed entirely without meat, substitute fine meal rubbed with bread crumbs and chopped onion for the grits, and keep on with the bread and beer.

Henhouse and Yard (*Edith A.*).—Your very good sketch is the design of a very good miniature run and house. The red line partition is not necessary. Where you have but little space to spare the laying house must form part of the roosting house of your birds, and the nests would do well as you have drawn them. If made in blocks and moveable so much the better. Your carpenter would make the lean-to and put on the felt, and any of our wire-workers, on being furnished with a scale of measurement, would make you panels of galvanised frames to meet exactly your requirements.

Canaries and Cayenne Pepper (*Curioso*).—Canaries are made high-coloured with the free use of cayenne pepper in their food. Some breeders mix it with egg and biscuit; others use it in a cake with which they freely feed the birds the whole of the moulting period. To one egg, when hard boiled and chopped fine (or it may be more effectually done by pressing through a sieve), add two teaspoonfuls of cayenne pure and mixed well together. Then add one small biscuit reduced to a powder. Mix the three ingredients together and supply your (say some half-dozen) birds with the diet two or three times daily. No green food during the moult. The more of the pepper food the birds partake of, and the less of seeds, the deeper the colour of the plumage will be. You need not fear your birds feeding upon the above food. Commence with the pepper diet when the young have attained the age of six weeks. There will be no necessity to put the whole of the young birds upon the cayenne diet. Select for the purpose the boldest and most likely-looking cock birds. Young Canaries bred from pepper-fed birds will not be high-coloured in first or nest feathers. To make them high-coloured they must be moulted upon cayenne.

Kedlock Seed (*Constant Reader*).—See Journal of last week for advertisement announcing the sale of Kedlock seed.

Stimulating Food for Canaries (*Subscriber*).—Any extra diet or food (beyond the usual supply of canary, hemp, millet, rape, and flax), such as egg and biscuit, with a pinch of pepper in it, dandelion, small salad, cress seed, German paste, or a little biscuit slightly soaked with sherry wine, or a few drops in the fountain, will each and all tend to prepare or stimulate Canaries for breeding purposes.

Driving Bees (*W. W.*).—Without seeing your hive it is difficult to decide whether the bees should be allowed to remain in the top hive or be driven into the bottom one. As the combs in the top hive are very old and the bees hung out in clusters for weeks last year without swarming, it is preamnable that they may not swarm or do better this year if not treated differently. Take or part the hives asunder and examine both. If the combs in the nadir are chiefly composed of worker cells (not much drone comb) we would drive the bees from the hive of black combs into the other, and feed them twice or thrice a-week for a month. If the combs in the nadir are chiefly of the drone kind better let the bees remain amongst the old combs, and swarm them artificially when the hive becomes full. It would not be safe to put the bees into an empty hive at this season.

Hives (*W. R. F.*).—Write to Mr. Pettigrew, Priory Vineyard, Sale, Cheshire.

Two Hives of Bees (*Triceps*).—You want to know how best to manage your two strong hives, so as to get one swarm out of them and no more, but plenty of honey. We advise you to drive the strongest of them into a new hive about the second week in May, or as soon as they begin to hang out. Put the new swarm so driven in its new hive in place of the parent hive out of which they were driven. Be sure you drive out or otherwise dislodge every full-grown bee, so as to make the swarm as large as possible. Having thoroughly emptied of its bees the old stock, put this over your other strong stock, taking care to open the communication between the two hives. The bees from below will ascend into the empty driven stock, and after hatching out all the young bees will proceed to fill the cells with honey as fast as they become vacant. The fresher the comb in the supered stock the finer will be the honey stored there. The swarm in a good season and a good locality ought to give you some honey too.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. March.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 foot.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 10	30 442	41.0	37.6	E.	42.3	5.4	30.5	91.8	27.8	—
Th. 11	30.282	40.0	37.8	N.E.	41.0	46.7	30.5	90.5	29.4	0.010
Fri. 12	29.980	35.9	34.8	N.E.	40.1	39.0	35.0	59.3	34.4	0.022
Sat. 13	29.843	38.7	36.3	N.E.	39.5	41.9	35.8	52.8	35.5	—
Sun. 14	30.093	40.4	39.0	E.	38.5	49.0	36.3	84.8	33.8	0.010
Mo. 15	30.161	35.2	35.0	N.E.	39.8	51.1	31.0	85.7	29.2	—
Tu. 16	30.226	36.2	35.0	N.	40.0	44.8	33.0	62.9	31.2	—
Means	30.163	38.1	36.4		40.2	46.3	33.1	75.4	31.6	0.042

REMARKS.

10th.—White frost in morning; very bright and nearly cloudless day; overcast in evening.

11th.—Another bright day, with bitterly cold wind and rather more cloud.

12th.—Very dull day, with bitterly cold wind and overcast sky.

13th.—A similar day; but warmer in the evening, and a few drops of rain.

14th.—Overcast early, but brighter after noon, wind still very cold.

15th.—Cloudy morning, but sunny afterwards; sky nearly clear at night. Lunar halo.

16th.—Overcast the greater part of the day; a fog, like a November one, but not so dense, came up suddenly at 5.30 P.M., and lasted the rest of the evening.

A cold parching week.—G. J. Symons.

COVENT GARDEN MARKET.—March 17.

There is not anything fresh to report, business being generally very quiet both at home and provincially.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples ½ sieve	1 6	to 3 0	Mulberries ℔ lb.	0 0	to 0 0
Apricots doz.	0 0	0 0	Nectarines doz.	0 0	0 0
Cherries ℔ lb.	0 0	0 0	Oranges ℔ 100	8 0	12 0
Chestnuts bushel	10 0	20 0	Peaches doz.	0 0	0 0
Currants ½ sieve	0 0	0 0	Pears, kitchen doz.	2 0	3 0
Black do.	0 0	0 0	dessert doz.	3 0	6 0
Figs doz.	0 0	0 0	Pine Apples lb.	2 0	6 0
Filberts lb.	1 0	1 6	Plums ½ sieve	0 0	0 0
Cobs lb.	1 6	2 0	Quinces doz.	0 0	0 0
Gooseberries quart	0 0	0 0	Raspberries lb.	0 0	0 0
Grapes, hothouse lb.	8 0	12 0	Strawberries ℔ lb.	0 0	0 0
Lemons ℔ 100	8 0	12 0	Walnuts bushel	8 0	12 0
Melons each	0 0	0 0	ditto ℔ 100	1 0	1 6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes doz.	8 0	to 6 0	Leeks	0 4	to 0 0
Asparagus ℔ 100	6 0	10 0	Lettuce doz.	1 0	2 0
French per bundle	20 0	30 0	Mushrooms pottle	0 9	2 0
Beans, Kidney per 10	2 0	3 0	Mustard & Cress punnet	0 2	0 0
Broad bushel	0 0	0 0	Onions bushel	3 0	6 0
Beet, Red doz	1 0	3 0	pickling quart	0 6	0 0
Broccoli bundle	0 9	1 6	Parsley per doz. bunches	6 0	8 0
Brussels Sprouts ½ sieve	3 0	4 0	Parsnips doz	0 9	1 0
Cabbage doz.	2 0	3 0	Peas quart	0 0	0 0
Carrots bunch	0 6	0 8	Potatoes bushel	2 6	6 0
Capsicums ℔ 100	0 0	0 0	Kidney do	3 0	6 3
Cauliflower doz.	4 0	8 0	Radishes doz. bunches	1 0	1 0
Celery bundle	1 3	2 0	Rhubarb bundle	1 0	1 6
Coleworts doz. bunches	5 0	8 0	Salsafy bundle	1 6	0 0
Cucumbers each	2 0	3 0	Scorzonera bundle	1 0	0 0
pickling doz.	0 0	0 0	Sea-kale basket	2 0	3 0
Endive doz.	2 0	0 0	Shallots lb.	0 3	0 6
Fennel bunch	0 3	0 0	Spinach bushel	0 0	4 6
Garlic lb.	0 6	0 0	Tomatoes doz.	0 0	0 0
Herbs bunch	0 3	0 0	Turnips bunch	0 6	0 0
Horseradish bundle	0 0	4 0	Vegetable Marrows doz.	0 0	0 0

WEEKLY CALENDAR.

Day of Month	Day of Week	MARCH 25—31, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m.	h.	Sun Sets. m.	h.	Moon Rises. m.	h	Moon Sets. m.	h.	Moon's Age. Days.	Clock before Sun. m.	s.	Day of Year.
25	Th	Lady-day. Messrs. Veitch & Sons' Exhibition of	50·9	32.8	41·9	53 af	5	19 af	6	49 af	10	48	6	18	6	5	84
26	F	Good Friday. [Spring Flowers at Chelsea.	51·8	32.6	42·2	51	5	21	6	54	11	3	7	19	5	46	85
27	S	Royal Horticultural Society, Mr. W. Paul's Exhibition	54.1	34·1	44·1	49	5	22	6	morn.		24	7	20	5	28	86
28	Sun	Easter Sunday. of Spring Flowers to April 3rd.	53·0	34·0	43·5	46	5	24	6	5	1	53	7	21	5	9	87
29	M	Bank Holiday. Mr. Cutbush's Spring Show at High-	53·7	33.4	43·6	44	5	26	6	10	2	34	8	22	4	51	88
30	Tu	Chemical Society Anniversary at 8 P.M. [gate.	53.7	34·3	44·0	42	5	27	6	5	3	31	9	(	4	32	89
31	W	Royal Botanic Society's Spring Show.	53.3	33·9	44.6	40	5	29	6	46	3	41	10	24	4	14	90

From observations taken near London during forty-three years, the average day temperature of the week is 52.9°; and its night temperature 33·6°.

SHANKING: ITS CAUSE AND CURE.

SHANKING, like many other so-called diseases, is not a disease at all, it is merely a reminder—and not always a gentle one—on the part of Nature that we do not understand her teachings. I believe outdoor Grapes do not often shank, and we know they do not always have the most skilful treatment, but put a glass covering over them and they are at once liable to shanking, imperfect setting, and all sorts of bad behaviour. Why is this? Why should they, like most recipients of charity among the genus homo, behave badly in proportion to the amount of kindness lavished on them? Similar cases occur with many other plants besides Vines; they do tolerably well left to themselves, but immediately they are nursed their constitution seems impaired, and they require all sorts of indulgences.

The reason is, we only possess a partial knowledge of the plant's requirements. We perhaps understand perfectly what is required above ground to produce vigorous growth, and even tolerably well-ripened wood, and flatter ourselves that all must be right, and picture in our mind's eye the well-finished Grapes we shall have to astonish our friends with in the coming summer.

This illusion is kept up through the greater part of the following season of growth; the Vines break regularly and strongly; they show three times as many bunches as are required; they set well, if they are Hamburghs or Sweetwaters, and swell rapidly; they commence colouring. All must be right this time; but no, many of the berries which should turn blue-black turn to a very ugly red, and never ripen at all.

On examination it will be found that the stalks of such berries have shrivelled and ceased to perform their functions. Sometimes the shanking will be visible before this time, and occasionally it is delayed until the berries colour tolerably well, but they will not become sweet; yet at whatever stage it is visible chronic cases always occur from the same cause—viz., insufficient root action in proportion to the growth at the top during the early part of the season.

There may be slight temporary cases resulting from overcropping, denuding the plants of foliage or from insufficient watering, but the progress of shanking is then easily arrested by a change of treatment. On the other hand, let the roots of a Vine be in a cold outside border, and its head comfortably housed in an average temperature of 70° during the cold spring months, nothing on earth will prevent its fruit shanking after a few years of such treatment.

I am aware that most people who have to produce early fruit from Vines which have their roots outside protess to cover their borders, but are they always sure the principal roots are under the covering? They may be a hundred yards away.

Shanking also occurs on Vines which have their roots wholly inside the house, and even on those which are unforced: can it then be said to arise from the same cause? Most assuredly. The Vine is like no other plant with which I am acquainted, for it makes considerable growth at the top, and even forms full-sized leaves, before it commences to root; and in the case of small cut-down plants which are only allowed to make one shoot, the said shoot grows from 9 to 18 inches in length before a single rootlet begins to move; the length of such growth depends mainly on the temperature in which it is made.

If, then, it is clear that this growth is made from the stored-up sap and the stored-up sap is limited, there is no advantage in distributing it over 18 inches of growth instead of confining it to 9 inches. For this reason I prefer the growth to move as slowly as is consistent with healthy growth till the roots commence action, and as I know there must be a certain amount of foliage before the roots can commence, I never disbud till the leaves assume a darker green and plainly tell that they have a new supply of nourishment. The growth made after this will be more solid, and when ripened the wood will be round and contain but little pith, instead of being flat, as it often is on young Vines which have been cut down.

I have alluded to young cut-down Vines to make my meaning clear. In the case of older Vines making numerous growths it is very similar, only the growths from being numerous are not so long. They also come into full leaf before root-action commences, and the length of growth thus made also mainly depends on atmospheric conditions. The embryo bunch is already formed in the plump bud of the previous year; its supply of nourishment till such time as root-action commences is limited, a high temperature as soon as the buds have started will bring it out quicker than a medium one, and the bunch will also look larger. This deceptive appearance is owing to the flower stalks being longer than they should be; instead of being a quarter of an inch they are, perhaps, three-eighths long, and of course weak in proportion.

They will never recover this, and though they may grow luxuriantly till colouring time, they will most assuredly shank. It must not be thought that the length and strength of the flower stalks are determined after these are visible, it is much earlier than this that the mischief is done, although continued ill-treatment may aggravate it.

If my readers will agree with me as to the cause of shanking, the cure will suggest itself—viz., a healthy medium for the roots and a moderate temperature till the flowers are set. They will probably find this cure for shanking also a cure for bad setting. 55° is the minimum atmospheric temperature aimed at for all Vines, including Muscats, till the flowers are set; 5° lower occasionally will do them no harm at any time. After they are set they will bear almost anything short of roasting. My earliest Grapes are produced on pot Vines, for which the atmospheric temperature is about the same as that given above, but they have a bottom heat of 80° to 95°.

If the roots of a Vine are in a greenhouse, the border is often covered with plants all through the spring months

so that not a ray of light can reach it. Roots so situated are probably in a lower temperature, and altogether worse off than they would be in an outside border.—William Taylor.

ROSES.

"Our Journal" without some Rose notes is to me always like the play of Hamlet without the prince, and of late, somehow, this melancholy arrangement has been in vogue. "How to grow them and how to show them" is a theme which will defy exhaustion, even at the hands of those reverend amateurs whose Rose knowledge of which we have now and then such pleasant glimpses.

Reviewing the Rose contributions during the past year, nothing, it seems to me, has appeared having more practical value to a large section of Rose-growers than the published election lists so carefully collected and summarised by Mr. Hinton. Nothing is more bewildering to a novice, or to one whose limited leisure, means, or space precludes his growing more than a few varieties, than to wade through the pages of a nurseryman's list, where the glowing adjectives vie with the flowers they are supposed to describe, driving him at last to feel that "Cæsar and Pompey are very much alike, especially Pompey." After Mr. Hinton's yearly lists have been fairly compared such an amateur need be under no difficulty in selecting a reasonable number of what ought to turn out satisfactory kinds, and this is a real gain.

Shows are somewhat fallacious standards, as to a tenant farmer on a poor estate is a high-pressure lot of shorthorns from the herds of titled breeders at the "Royal" as a guide for what stock he had better invest in.

The best collection of cut blooms I had the chance of examining last year was at the Exeter Show held the 3rd July; and as an example it will doubtless be remembered by some who were there, at least by the Rev. Mr. Camm with whom I had the pleasure of a short gossip over the boxes, that a bloom of Centifolia Rosea, shown by Paul I think, was one of the finest Roses in the Show. This of course could only be looked on as a fluke, and so a bad guide to buy from. It is nowhere in the election list for the best fifty.

But no Show has ever yet surprised me as do the lists of the Rev. Mr. Radclyffe which frequently appear. I have hardly ever been able to verify his recommendations by experience. On the 20th August "C. P. P." and the Rev. Mr. Camm specify objections to the Roses named by him and demur to his omitting certain well-known high-class varieties, and I am at one with them in what they have said. As to Felix Genero, I have not only never succeeded in growing a decent flower from this Rose, but I have never found anyone else that had. And Madame Margottin is probably the last Tea Rose I should recommend: it is as ragged as a Falstaff recruit. I should really like to know Mr. Radclyffe's secret for growing satisfactorily Edward Morren. I have, moved by his eulogies, done my best with it on the Manetti and on the Briar, but it will open badly; and if two or three blooms in a season condescend to expand, they are so loosely made and so susceptible of being spoiled by sun, wet, or wind, that I should class it as one of the most unpromising Roses for the amateur who cannot afford to run a race of experimental selection.

On the 13th August he says, "I specially recommend to persons liking dark Roses Louis Van Houtte, Baron Chaurand, Maxime de la Rocheterie, and Baron de Bonstettin." He omits from his *general* list of desirable Roses La France and Marie Baumann because of their weak growth. The fact with me is that both these Roses are more robust and free-blooming than Louis V. Houtte; and in "our Journal" of the 24th September there appears an election list made in the north, which shows that even there both these Roses stand amongst the highest. Now take Prince Camille de Rohan, a Rose I have never known him recommend. It was in every show stand of general collections in Exeter; and my proof of it is that, all points considered, it has no superior as a dark Rose; and for vigour simply—Mr. Radclyffe's great point—it is difficult to find an equal.

I am somewhat surprised to find Mdlle. Marie Rady does not have a better place in the election lists. As a late bloomer especially it is an admirable Rose; and take the season through, on the Manetti it gives as many perfect blooms and such substance in them as any I could name. It would be included by me in the best twelve.

Marquise de Castellane by the voting has retrograded this year. This I think is only temporary. It is fine in colour, vigorous in habit, and free-blooming; and I believe the ordinary grower will not regret having it in his collection.

Etienne Levet has had a successful year and bids fair to be a good Rose; but I have found François Michelon so far to run thin. Of Madame Lacharme's shortcomings I can endorse all the bad things Mr. Beachey and others have said about her. Comtesse d'Oxford, both on Briar and Manetti, retrograded with me in 1874; it has the knack of fading rapidly, which is not in its favour. Lyonnais is a good Rose. Mdlle. Eugénie Verdier though shy is worth trouble.

The old veterans hold their own in the far west. Alfred Colomb, Charles Lefebvre, Duke of Edinburgh, Baronne de Rothschild, Camille Bernardin, Souvenir de la Malmaison (specially valuable in autumn), John Hopper, Pierre Notting, Marguerite de St. Amand, Jules Margottin, Général Jacqueminot, Abel Grand, and Fisher Holmes. Nevertheless, after admitting to the full all the glories of the Perpetuals, I quite share Mr. Camm's enthusiasm for Teas: they are the true Perpetuals.

What after all can be, not only more lovely but more certain as a matter of culture over a large part of England, than the "oceans of blooms" a good collection of Tea Roses fairly attended to will give?

Take trellised lines of Gloire de Dijon, Souvenir d'un Ami, Safrano, Catherine Mermet, Madame Willermoz, Souvenir de David, Marie Van Houtte, Madame Falcot, Devoniensis, Adrienne Christophle, Canary, Homère, Vicomtesse de Cazes, Rubens, Madame Bravy, Perfection de Montplaiser, with their half-sisters Triomphe de Rennes, Lamarque, and Celine Forestier leading from and to these, "through many a bowery turn," of wire or wood arcades with blooms of Rêve d'Or in profusion mingling with Clematises Jackmani, Prince of Wales, or others of that ilk; and if a bit of wall can be had cover it with Maréchal Niel, Climbing Devoniensis, Perfection de Lyon, and the Banksians. What a feast for the senses! One need not be morbidly poetic for the radiance of such a sight heralded by the gentle air "full fed with perfume," to recall to his mind that bower whose

> "Flowery roof showered Roses
> Which the morn repaired;"

or that pavement

> "That like a sea of jasper shone
> Impurpled with celestial Roses, smiled."

To those who lead busy lives in these busy times I recommend such pleasures; they will find in their refining influence a fit counterpoise to the tenor of their daily occupation. If on trying it anyone should fail to find this relief in the hobby of Rose-growing their case is a bad one; and I do not think they can do better than seek out the "Wiltshire Rector," "open their grief," and seek of him the secret of that alchemy by which genuine pleasure and a healthy mind are to be derived from natural objects and harmless tastes.—Cornubia.

PEACH FORCING.—No. 2.

Borders.—These as shown in the sections, pages 69, 70, and 71 of the present volume of this Journal, are within and outside the house. Inside borders should extend the whole width of the house if there are trees against the wall as well as against the front trellis. The outside border should at least be equal in width to half that of the trellis to which the front trees are trained. In any case the border should be of the same width as the trellis the trees are to cover. For early forcing the principal border should be inside, whilst for those not started until a later period the main of the border may be exterior. Why I prefer part outside to all inside is that the former is always certain to be thoroughly moistened by the autumn and winter rains, and the roots in it are always capable of meeting any demand upon them for moisture by the head when the wood is ripening and the trees are at rest. This is more than can be said of inside borders, and over-dryness of the roots at that time is one of the chief causes of the buds dropping.

There is no fear of the roots in an outside border suffering any injury from frost, for, though the Peach be an exotic and tender, the Plum upon which it is worked is very hardy, surviving the severest weather uninjured, even when the surface soil is matted by its fibres. I do not, however, advise leaving them exposed to hard frost, but insist upon a few inches' thickness of short littery dung and leaves being placed on the border when forcing is begun, and that serves every needful purpose of protection for the roots.

Deep borders have been advised, but I do not see the utility

of them, for the Plum is a surface-rooter, and does not descend beyond a depth of 2 to 2½ feet. Everything is gained by a border 3½ feet deep, and of this 9 inches will be taken up by drainage, leaving 2¾-feet depth for compost. Beneath the drainage should be drains 9 to 12 feet apart, having proper fall and outlet.

Soil.—Though the Plum succeeds best in rather light soil, it is not the case with the Peach upon it. In poor light soil growth is weak, and the fruit correspondingly poor in quality; whilst if light soil is made rich the wood produced is slender though long, and wood rather than fruit buds result. Soil most suitable for the Peach is a medium-textured loam, neither sandy nor clayey, and if of a calcareous nature all the better. The soil, known as yellow or hazel loam, taken from a pasture, the top 3 inches, chopping it up in squares of about 2 inches, and to this add a fourth part of marl—that known as chalk-marl is most desirable for soil of the above description—the shell-marl, being very little, if at all, inferior, is a good compost. For sandy loam clay-marl is a beneficial addition; whilst for a heavy loam sandy-marl is good, in both cases adding the respective marls in proportion of one-fourth of the loams. An admixture of chalk we advise in every instance, excepting, of course, with soils of that formation. This should form one-eighth of the compost, and should be broken up moderately small, say in sizes from a hazel nut to an egg. Flint (silica) also broken up, or better crushed in a pugmill, in the same quantity as the chalk, is a welcome addition to a compost for the Peach, and, in fact, all stone fruits. The whole to be well mixed and be in a moderately dry state when used. On no account must the border be made with the compost in a wet condition.

I recommend the above mixture because the best trees and finest fruit I ever saw under glass were produced by such compost; at the same time I am aware that good fruit has been grown in plain loam. Those who cannot well procure the ingredients named above I advise them to mix with the loam one-fifth of cow dung and a sixth of old mortar rubbish. The materials to compose the border should be put firmly together, and it is hardly necessary to say that the lighter the compost the greater necessity for solidification, and the more adhesive the materials the less need is there to make firm. A light soil should be made hard and all firm.

Selection of Trees.—For very early forcing it has been recommended to have the trees in pots as pyramids, bushes, or standards. I can vouch for their answering well, the pots being about half plunged in a border of good rich soil the roots leave the pots and have extra feeding ground. Such trees are, however, more trouble in watering, and require very liberal treatment in top-dressings, and liquid manure if the fruit is expected to equal in size that of trees in borders. They also answer very well when the pots are not plunged, but the watering requires to be more frequent, and the feeding must be high. The trees should be of a fruiting size, and the growth ripened-off early in the previous year if the fruit is to be ripened early in the year following.

For starting early in December the trees should have the wood ripe in September, and may be plunged outdoors in a sheltered yet open situation. Trees so exposed suffer no damage, but are, I think, every way benefited. Not a bud drops, and they swell the buds more regularly than those kept inside; they start into growth sooner, and appear to be thorough cleansed of insects.

It will not be needful to make any extended remarks on the trees which are to be planted out; they should be of fruiting size, having been two or three years trained against a wall, and have a good extent of head to begin with, with some prospect of fruit the first season. The trees chosen should be well furnished, and it is better they be moderately strong, yet by no means having long luxuriant growths, as these receive too great a check in removal, and often lose some of the branches by gumming.

The mode of training the trees should be on is that known as the fan, selecting such trees as have evenly-balanced heads, clean healthy bark, and stiff, short-jointed, well-ripened wood. If young trees are planted they will require at least a year before they come into bearing, and ought not to be allowed to bear heavily the first two or three fruiting years. All this, however, is best avoided by planting fruiting trees in the first instance, such as will cover at least a third of their allotted space at once. There is no risk of the trees receiving any great check from removal if the work be done carefully, for the Plum is the best of stocks to lift with a mass of fibres.

I may say just a word in favour of bushes, pyramids, and standard trees planted out. They are no more trouble in watering than fan-trained trees, and a span-roofed house will accommodate them admirably. In this way it is more natural than training them flat to a trellis, and they answer quite as well, only for very early forcing the shoots are best near the glass; and as some of the parts of the bushes and pyramids must be at a considerable distance from it, they do not receive so much light as the upper part of the trees, consequently the growth and fruit there is not equal to that nearer the glass.

Sorts.—*Royal George.*—This is the best of all for early forcing, being a certain setter, a sure sweller, and ripening off well. Whatever the weather—sun or no sun, this kind invariably sets well, and is unquestionably the very best forcing kind.

Grosse Mignonne.—This I consider the next best forcing Peach, being a first-rate setting kind, swelling kindly, and ripening off perfectly. The fruit is larger than Royal George, and comes in a few days later.

Noblesse.—A free setter, but the fruit does not swell so kindly as Royal George or Grosse Mignonne, but is nevertheless one of the best forcing kinds, and the three aforenamed I consider the three best kinds for early forcing.

Violette Hâtive is a good setter and excellent kind for forcing. It ripens a few days later than Grosse Mignonne.

Barrington sets well, and is every way desirable, being a little later than Noblesse.

Bellegarde sets freely, but the flowers do not open well in sunless weather. It is a grand Peach, yet I do not recommend it, Barrington, or Violette Hâtive for early forcing, but all are excellent for starting after the new year.

I have omitted Early Beatrice and Early Louise (the latter only a few days later in ripening than the former), because they are an entirely new race, and one certain to upset our notions of early Peaches. The fruit of these is of fair size, but their merit is their earliness, ripening five to six weeks before Royal George in the same house. Early Louise is the better fruit, and both are very desirable.

With these we recommend the earliest house to be planted, the second with the three first-named, and any or all of the six first-named for the third house, and each house to be taken at a month's supply, though it will usually be longer continued.

Early York and Early Grosse Mignonne with others I do not recommend, as they do not either set well, or the fruit drops after setting. Almost any kind answers if not started until after February; but some kinds evidently have great aptitude to make wood when under the influence of high and continued artificial heat, and usually, though promising well, disappoint in the end.

Nectarines.—Stanwick Elruge, a few days earlier in ripening than the Elruge, is a capital setter. It is a very desirable forcing kind.

Lord Napier sets well, and is the earliest and best for early forcing.

Elruge is a good setter, even in dull weather, and one of the best kinds. It is desirable to associate it and Stanwick Elruge with Royal George, Noblesse, and Grosse Mignonne Peaches; whilst Lord Napier is suitable for the same house as Early Beatrice and Louise Peaches.

Pitmaston Orange and Rivers' Orange Nectarines are both free-bearers, and those with Elruge we recommend for the second house, as is also Stanwick Elruge. For the third house any of the four last-named and Violette Hâtive, Pine Apple, Victoria, and Albert Victor, the three last having large fruit, and are most excellent.

The above are all good kinds for their purpose, and will not disappoint.—G. Abbey.

GERANIUMS FOR BEDDING.

Now that the season is at hand for potting the above (where they have been wintered in their cutting boxes) many will be at a loss to find pots for that purpose, when thousands are required; and if potted, at a greater loss to find a suitable place in which to put them. As we are among that numerous class who have a great deal to do with comparatively little means and accommodation, I will just detail our usual practice with Geraniums.

The cuttings are struck in the usual cutting boxes, and wintered in any suitable place. About this time, the beginning of March, the plants are taken carefully out of the boxes with a hand fork, a little tough sod is then wrapped around

the roots, and tied with any handy material. We use the leaves of the New Zealand Flax, the fibre of which is very strong, a leaf being sufficient to tie three or four dozen plants. Since the Russian mats have become so expensive we have turned the leaves of this highly-ornamental plant to many useful purposes. I fancy I hear many of your readers say, What a pity to destroy this plant for tying Geraniums; but we have it growing here by thousands in the wildest profusion, and consequently have plenty to use.

I fear I am digressing. I will now return to the sodding, as we term it. This is capital employment for the outside men in inclement weather (I am no advocate for keeping men out when it is wet). When we have not had turf at command we use moss, with a handful of fresh soil around the roots. They are then planted out on a slight hotbed of leaves in pits or frames. When removed to their summer quarters the balls are a mass of roots, and can be planted with the greatest safety.

By adopting the above plan much time is saved in watering, and they start into growth and cover the beds sooner than when turned out of small pots.—W. Osborne, *Fota, Cork.*

REMOVING LARGE TREES.

As inquiries are occasionally made on this subject, my experience may, perhaps, be useful. I have removed trees of from 4 to 6 tons weight which have re-established themselves quickly and given the utmost satisfaction. I am not sure that I can make my mode clear, simple as it is, as I am more at home with the actual work than in describing the plan for others. I am, however, willing to make the attempt, and perhaps those who may be particularly interested will by a little study become conversant with what I endeavour to explain.

We will take the case of a Wellingtonia 15 to 18 feet high. The first thing is to tie all the lower branches carefully upwards to the trunk, so as to clear the base and afford clear room to work. When this is done decide which way the tree is to be drawn, and that side we will call the front. Now at 4 feet from the stem mark-out a trench at the least 5 feet wide or long, and dig-out the soil to the depth of 5 feet. This trench next the tree must be cut straight and square down, the opposite side of course being sloped to facilitate the drawing of the tree from the hole to the level ground. When this is done dig-out a similar trench on the opposite or back side of the tree. Now, suppose these two trenches are cut and we commence to undermine. But first have six or eight sound and strong 9-inch deal planks ready, and as many blocks as there are ends of planks. Commence to make a hole through the lump of earth at 3 feet from the surface. The top of this hole, which will be the bottom of the ball, must be perfectly level. The hole may be 2 feet wide or more as is convenient, but the nature of the soil must be the guide. When ready put through one of the planks and tighten it up with a bottle-jack in order to put a block under—that is, one under each end of the plank, having the front block somewhat the longest. Proceed the same with the other planks, blocking each securely as it is put in. When all are screwed-up level, and safely blocked, see to the rollers.

There must be three of these of at the least 6 inches in diameter, and 2 feet longer than the platform on which the tree rests is wide. These rollers must have two holes near each end in which to put crowbars as levers to move them by. Lay two planks under the platform for the rollers to work on. Now take four other strong planks, placing two under the ball of earth and two on the top exactly over them, and bolt these together by iron rods with screw and nut at the end of each. Four of these are required, one at each corner, which will grasp the ball from above and below, and keep all firm and tight. Care must be taken that the tree is in the centre of the platform. Now place the rollers under the platform, one as near to the front as possible, and the other two-thirds under. After making certain that the platform is level and secure, proceed to cut the sides, and the whole weight is on the rollers. The mass must now be drawn from its place.

This can be done by men and ropes. I use stout waggon ropes. Fasten these round the ball, then try the length of the ropes, and at or near their extremity drive into the ground two stout stakes. These must be square with the frame of the tree and must be put in with a sharp slant from it. These stakes must be very firm (as everything depends on them), so that they are not drawn back and upright by the weight of the tree. To secure this strength other stakes are sometimes necessary with a coupling chain, which an intelligent labourer will know how to fix. Now have another roller quite 4 feet long and 8 inches in diameter with a hole through each end. Place this roller on boards behind the slanted stakes and fasten the ropes to it. The tree is now ready to be moved. Two men must be at the stake rollers, and a sufficient number at the tree. As soon as the word of command is given the crowbars are put to work both at the tree and stake rollers, when the bulk moves and the ropes wind round the roller at the stakes. It is now a question of moving and blocking the rollers and steadying the tree, and with plenty of strength (men should never be limited at this work), the tree will soon be on the level ground. The stake roller and long ropes are now done with, and the tree is moved by the platform-rollers to its new site if that is near. If, however, it must be taken some distance, horse labour and wheels are requisite.

In this case my plan is as follows; but to simplify the matter I assume that most people who are at all acquainted with trees have seen a felled tree removed from the wood to the carpenter's yard by a "pair of wheels," as they are called in some counties, or the "wood gin" in others. The wheels are simply run astride of the tree which is fastened to the axle by a chain underneath. The shafts during the operation of fixing are elevated, which lowers the axle. The shafts are now used as a lever, and by drawing them down the tree is raised from the ground and is drawn easily away. That being understood I lay two trees side by side, yet not quite closely. They should be straight and strong enough for the purpose. On these trees I place the tree requiring to be moved, lifting the mass by the aid of a screw-jack until I can roll one of the trees underneath. Then treat the other side the same, and the platform rests safely on the two prostrate trees. These should be wedged to prevent them rolling. Now two pairs of wheels or gins are placed astride the trees, running them back to back until they reach the tree and bulk of soil which is placed on them. By fastening as above described and drawing down the shafts the weight is safely suspended. Nothing remains now but to yoke the horses and draw the wheels—one pair of course running backwards—and the home-made tree-moving machine is complete.

To remove the mass from the wheels, ropes and rollers are again used. When the tree is in the hole, its correct depth having been previously ascertained, unscrew the holdfasts at the corners and take away the cross planks. Block the other planks at the ends except the middle one, draw this away, and then the next and next, finishing at the sides, and the work is complete so far as regards the moving. With due attention to firming and watering, trees of great size can be moved by this simple means.

My practice is not given because it is the best, but as enabling anyone to make his own tree-lifting machine from materials which are found in nearly every village. Properly-constructed tree-lifters are often a hundred miles from the place where they are required, and by making known this efficient substitute it can hardly fail to meet the requirements of some of the readers of the Journal, and, perhaps, of "T. S.," who on page 148 of the present volume seeks advice on this question.—A. M., *Essex.*

GLOXINIAS AT M. LOUIS VAN HOUTTE'S.

Mr. Luckhurst in his seasonable remarks on raising these beautiful plants from seed reminds me of a display I have seen in the famed Belgian establishment of M. Van Houtte. This collection certainly merits notice, as being probably the most extensive in the world and of unsurpassable merit. The mode of culture adopted is exceedingly simple and altogether different to that commonly seen and described in England. It may not be adapted to our wants and ways, yet in a more limited manner it may possibly be successfully carried out by those desirous of raising the finest corms in the quickest manner and with the smallest amount of cost in attention.

The collection in bloom at the time of my visit consisted of 50,000 plants, each plant carrying twenty to fifty flowers, and set in foliage of the most perfect health imaginable. The period was in September, and every plant was raised from seed sown in the spring, and not one plant was potted, or ever had been, during the period of its existence. Besides this collection there were numbers of plants grown in pots for the decoration of the different glass structures, and these were fine, yet they did not equal in freedom of growth and size of blooms the immense stocks planted out to raise roots for ex-

portation, and as a nursery ground from which to select new varieties to add to the catalogue collection.

The appearance of this immense plantation of Gloxinias was a sight which can never be forgotten, not only as to its novelty, but of the indescribable beauty and richness of the million of blooms. There would be at the least that number, and their effect in all the varied colours which the species down to that time had been capable of producing may be in some measure imagined, but cannot be clearly described.

Now this extraordinary collection of seedlings was not planted out in heated houses or pits, but only in unheated enclosures, which some might call an apology for cold frames, so exceedingly simple was the arrangement of the shelters, for structures they can hardly be called. They consisted of 2 to 3-inch deal planks set on edge, enclosing a width of about 7 feet of space, and on these planks the lights rested after the manner of improvised frames for the use of hardening-off bedding plants. The back ranges of planks might be about 15 inches in height, and the front rows something less than a foot—in fact, just sufficient to provide an ample slope to carry off the water from the glass.

Had these rows of frames been placed in one length they could not have reached far short of a mile. Now, fancy a border of Gloxinias a mile long and 2 yards wide. Better, however, not exaggerate, but see what that represents; well, at a foot apart it would contain 31,680 plants; but the number in bloom I was positively assured—and I inquired of three different men—was upwards of 50,000. The glass, however, was not in a row, but was arranged in a sheltered square of the nursery, and appeared to cover an acre. Well, then, an acre of Gloxinias, what does that represent? At a foot apart it will be 43,560, which does not reach the number within 6400; but as they were planted about 9 inches apart, and there were paths between the frames, the Gloxinia garden may be fairly set down as an acre in extent.

But to see the plants in such perfect health it was almost incredible that no artificial heat was used. That there was neither hot-water piping inside nor manure linings outside is certain, and I was further assured there was neither one nor the other used beneath the soil to afford bottom heat. The only heat used to grow the Gloxinias so splendidly was from the sun alone. The soil in which the plants were growing was mainly leaf mould, of the same nature as that in which Camellias and Azaleas luxuriate in so remarkable a manner. The seed of the Gloxinias is sowed in February, and when large enough the seedlings are pricked out in pans. As they grow they are allowed more room, and when the weather is favourable, about the beginning of June, they are planted in their blooming quarters. The principle of culture is to keep them growing and to suffer them to receive no check, or want of food or room, from the first period of their vegetation. They certainly were blooming magnificently, and many of the flowers were of great size.

Out of this immense number of plants less than a dozen were selected to add to the catalogue collection and for propagating purposes. The rest are all sold. They are classed in categories of quality, and sent in a dry state by the hundred and thousand to all parts of the world, and the purchasers name them or not as they choose. The corms are by this mode of culture brought to perfection the first season, and will produce plants of any size required. They are produced better and at a smaller cost in labour than if grown in pots, and are consequently sold at lower prices than would otherwise be remunerative. Now in raising Gloxinias in quantity and for testing seedlings, surely some modification of that mode is adaptable to many parts of England. I am not conversant with the mean temperature of Ghent, but as being the same latitude as the south of England the plan, with the same care that is given in Belgium, should hardly be considered impossible here. If, indeed, a little material for bottom heat were required, it would be as well applied as in growing bad Melons. Useless frames could be utilised, and a beautiful flower supplied at a cheaper rate and remunerative to the producer than is the case at present, and its cultivation would spread into every garden in the land that afforded convenience for its culture. The Gloxinia would, furthermore, be in more general use for summer and autumn decorative purposes in towns and cities from where it is in a great measure excluded by the costliness of the present mode of production by artificial heat and potting.

At any rate, if it is not practicable to thus cultivate them in England, it may not be devoid of interest to hear how they are so freely, easily, cheaply, and perfectly produced in other lands, and hence these remarks of—An Ex Visitor.

LOOK OUT FOR QUEEN WASPS.

Now that the time is at hand when every wasp that may be seen will be in search of a location for a nest, and if unmolested will become the parent of thousands, I would ask all gardeners—yes, and bee-keepers too—to kill every wasp they possibly can; for by killing the early wasps we can expect to gain a victory over such pests during the fruit and honey season.

There are few insects more annoying to the gardener than wasps. They attack the best fruits in the garden, although the gardener tries all preventives he possibly can think of—such as bottles containing sweet syrup, gauze over the apertures for ventilation, gauze bags made to fit each bunch of Grapes, &c., which bags to my mind do not look well in any vinery, as they hide the beautiful fruit when the eyes should be feasting thereon.

Now I think if gardeners, or horticulturists in general, were to form unions in their several districts, and offer a reward to all those who might choose to kill wasps from as soon as seen until the end of May, they would destroy hundreds of queens and prevent thousands of wasps that otherwise would come forth.—William Laurie.

OUR BORDER FLOWERS—PENTSTEMONS.

In this as in some other tribes of plants a little confusion exists in regard to their names. Pentstemon pubescens has been called Scouleri, and P. Richardsoni confounded with P. venustum; when such is the case it is an unfortunate circumstance. I know that it is a very difficult matter to keep plants true to name, as sometimes in changing hands mistakes are made, and perhaps not at once discovered. To enumerate the family is not my object, yet I would direct attention to a few neglected varieties that ought to be more frequently seen in collections of border flowers and for rockeries.

Pentstemon ovatus is one of the most desirable plants we possess; it has beautiful blue flowers, and grows about 1½ foot high. It seeds freely, but is kept true by division. It is desirous also for pot culture. The white variety of the above is a perfect gem in its way. These, I am inclined to think, are the best of the race. P. Scouleri is a plant seldom seen; it is of rather prostrate habit when left to itself, but with care may be made a very effective plant for all purposes. It strikes readily from half-ripened shoots, and grows well in sandy loam and peat, but must have thorough drainage. When in bloom its lavender-coloured flowers are very attractive. It is indispensable as a rock plant, and will repay any amount of care bestowed upon it.

P. Richardsoni is a very useful border flower continuing in bloom most of the summer; it requires attention in tying-up, and is best raised from cuttings. It is quite hardy. P. venustum is of graceful habit, and is one of the earliest bloomers of the family; it is of light purple colour, and is very desirable. It should be raised from cuttings. Pentstemon glabrum is of dwarf habit, is of purplish blue colour, and ought to be more cultivated than it is. P. pulchella is a very graceful plant of good habit, the colour being rosy lilac. It is best increased from cuttings yet seeds freely, and from a small packet of seed many different coloured flowers are obtained. There are many more of this interesting family which require to be better appreciated.

CHELONE.

This is a small family of plants allied to the Pentstemon; I like, however, to have them to themselves. They will succeed well under the same treatment as the Pentstemon, and are best increased by division in spring or autumn, but may be raised from seed if desired. They are of slender habit, but being generally tall-growing plants they require care in staking. They continue a long time in bloom; they are desirable as cut flowers.

Chelone barbata is the most frequently met with, and is said to have been introduced from Mexico. C. glabra is a very desirable American species. C. obliqua should find a place in all borders where herbaceous plants are cared for; its colour, which approaches to purple, contrasts favourably with the scarlet and white varieties. C. Lyoni is a very useful plant in open spaces in the shrubbery. The soil should be well broken up, and have an admixture of loam, peat, leaf mould, and sand, and the site should be well drained. When thus

cared for they will well repay any extra labour bestowed upon them by their beauty through the summer.—VERITAS.

FORCING RHUBARB.

I AM no stranger to the putting of long dung on the top of Rhubarb roots in November, having covered up some scores of acres in my time, and have a vivid recollection of pulling it in the locality of Woolwich on cold frosty mornings. But this kind of forcing is beside the question; yet I may add that this very season I covered up a large bed here, which is now 5 inches long, March 16th. Mr. Saunders may say I have not the early variety, but mine is Champion, from the best Rhubarb-grower in London, Mr. W. Myatt. The question is simply, Is Rhubarb best grown in cellars or forced under tubs with leaves? My experience tells me that the latter is a long way the best; in fact, the two compared together is best described by using a Covent Garden Market term:—cellar Rhubarb is "thirds," or what is put in the middle of the "firsts" when being tied up for market. I may add, in conclusion, that Asparagus, Seakale, Rhubarb are all best forced without being lifted, and that at all seasons.—R. GILBERT, *Burghley*.

NOTES RELATIVE TO THE POTATO.

IN your Journal, No. 726, page 157, I read with interest "Notes Relative to the Potato" from Mr. Luckhurst, and, as he suggests, willingly contribute my practice, and also that of my employer, whose experience has extended over forty years.

He says, previous to 1847, the year of the great failure, as they call it, in this country (Ireland), that degeneration was very rapid; it was scarcely possible to have Potatoes for a very few years. Sets taken from the same lot of Potatoes and grown in the same ground were most decided in their degeneration, and only about half of them would grow satisfactorily.

Now in this district (Ulster) this degeneration has entirely disappeared, and Potatoes having proper care never fail to grow. Our reasons for this are, the blight comes on before the tubers are quite matured, and make better and surer-growing sets, as has been proven by myself, by lifting the tubers long before ripe. Mr. Luckhurst says he does not believe in blight-proof Potatoes. I think most people must agree with him; the nearest we can come to prevent it is suitable soil, dry situation, which the Potato is very fond of, and lift the crop as soon as possible.

I admit the tubers are often affected after being stored, but not so much so as when left in the ground exposed to autumn showers and fogs, the latter being very injurious to them. The soils best suited to their culture here are light loams and sandy soils mixed with peat. The manures are farmyard and common seaweed in equal quantities; but better still is Wrack (Zostera marina). I believe the Potato is very fond of potash, and the latter is possessed of a large proportion of it.

I hope to hear soon from more able pens the experience of long practice, which would be highly acceptable to amateurs on this most important matter.—JAMES KENNEDY, *Gardener, Comber, Co. Down*.

SOIL-MIXING FOR POTTING PURPOSES.

THE remarks on mixing soil by "A PRACTICAL GARDENER" are good and to the point, and are made at a very opportune time. One can hardly say too much in favour of the plan recommended. I daresay that many gardeners have often felt the need of such a preparation as that described on page 155, when a little of this and a little of that has to be collected, perhaps some being soddened with wet or frozen to such an extent so as to be really unsuitable for immediate use. How often I have felt the necessity of such a store is hard to say, but more times than I care to mention.

I will mention another good plan—that is, whenever any alterations are going on, such as relaying turf, save every shovelful and pack it away. I would also take the parings of walks wherever the soil is of a loamy nature and would pack it up in square heaps, as follows: First begin with a layer of turf, then have some well-rotted manure and make alternate layers of turf and manure, of course having a less quantity of the latter, after the fashion of preparing sandwiches. On completing the heap there would be no need to protect the sides from the weather, but the top might be made weather-proof according to the taste of the builder. If such a heap is put together at the present time it would be in fine condition in a year hence, or in less time if needed.

Many of us know that in well-ordered gardens provision is made for all these necessaries—viz., a compost yard where such matters are carried on in a systematic order; but every gardener cannot boast of such a place, hence the difficulty arises where to make these stores. Now there is more importance attached to this than many people imagine, and I think a word or two on that point will not be out of place.

I have seen similar preparations carried on in some out-of-the-way place under large trees; but I say advisedly, Avoid such situations if possible, and for this reason—that the store in question would act as a magnet to the roots of surrounding trees, which would be sure to eat up the sandwiches. I have so suffered through not giving the subject any forethought.

When such a heap is in a fit state to use there is no need to take the soil from off the top of the heap, but merely begin at the end or side as the case may be. A sharp spade will chop it down in slices keeping a perpendicular face, when all will blend nicely together, and would form such rich food that the queen herself—the Rose—would not object to the fare.—G. R. ALLIS.

ROSE TREES AND FROST.

As "P." wishes the experience of others on this matter, I write mine. My experience and treatment of Roses that have suffered from intense cold is precisely the same as his. I do not, however, cut away old wood unless it is injured. I observed what he has stated—namely, that the old wood suffered, and not the new twigs, in the spring of 1861. I wrote to Mr. Henry Taylor, of Fencote, Bedale, Yorkshire, an experienced rosarian, for an explanation of this, and nearly as I can recollect he replied, "Sap is a non-conductor of both cold and heat. It is certainly a non-conductor of heat: hence the iron-smelters stir the liquid with green wood and branches, and not with dead wood." The Roses here have suffered but little this winter; but wherever there is injury it is in the old wood and not in the new twigs, which are only injured at their extreme points.—W. F. RADCLYFFE, *Okeford Fitzpaine, Dorset*.

I do not think that your correspondent "P." is correct in attributing the death of the older wood of his Rose trees to the effect of the frost alone. There are two ways of growing Roses. One, that which is described by "P."—viz., the encouragement of young wood from the base and the annual cutting away of the old at pruning time; the other, the preservation of the main shoots and the removing of all buds from the base as soon as they show themselves. These two methods cannot be combined in the same plant. If the first be followed and gross shoots are allowed to grow from the base, the older wood above the point from which those shoots proceed will gradually become unhealthy, the bark will lose its fresh colour, the buds will break the first year unwillingly and produce weak shoots; if left another season they probably will not break at all, and the wood will gradually become quite dead. This will take place whether the winters be severe or the reverse.

The cause of it is not the temperature to which the plants are exposed, but the diverting of the main stream of sap from the older into the younger and more vigorous growth. The old wood dies, not because the sap in it is frozen, but because it has not been able during the preceding autumn to store up a supply of vigour sufficient to enable it to withstand a winter temperature; and any unusually severe weather only hastens what has already become inevitable.

Now if "P." will select a dozen of his plants and carefully cut-off every shoot proceeding from the base as soon as it shows itself, the main stock may be kept in perfect health and sufficiently hardy to withstand severe frost for almost any number of years. I have plants which have been so treated for seven or eight years, and the old stumps produce clean and vigorous shoots and perfect flowers every season. This latter method must be followed if you wish for specimen plants. When you have got your head into shape, the only way to keep it so and to preserve its health and vigour, is to prevent gross shoots from pushing from the base. The moment one of these is allowed to grow (and they are always the most vigorous), that moment the health of all above is impaired, and decay commences.

There is nothing, then, extraordinary in the fact that these strong, green, robber shoots, which are usually twice as thick and twice as long as any other on the tree, should be able to withstand the cold better than the half-starved older wood.

Keep the sap flowing through the old wood by allowing only those buds which proceed from the extremities of it to grow, and it will stand any frost as well as the young.

Is well-ripened wood hardier than that which is immature? Certainly; but then it depends upon what you mean by "well-ripened." The shoot which "P." speaks of as having pushed from the base of his Maréchal Niel is no doubt to all intents and purposes "well-ripened." Though, doubtless, succulent for the first month of its career, if it has grown some 5 or 6 feet it can be succulent no longer. The pulp has ere this changed into woody fibre throughout a considerable portion of its length, and this being the case, it is as frost-proof as if twelve months old. Possibly the extremity for a foot or 18 inches may be still pulpy: in that case it is most likely frostbitten, but the rest of the shoot has a better chance of life than the remainder of the tree which this gross shoot has robbed of a considerable supply of winter food.

Some may ask, Which is the better of these two ways of growing Roses? It all depends what you want them for. If you require trim shapely plants for ornamental purposes or specimens, and do not mind the trouble, keep down your gross shoots. The quality of the flowers as to size will not be quite so good, but you will make up for it in quantity. If you grow a large number, you must of necessity allow them to grow pretty much as they will, and select the best shoots at pruning time. If you grow for exhibition, encourage your strong shoots from the base, and cut out your old wood every year. Properly managed, these produce the best and largest blooms, but you must content yourself with a less number.—R. W. Beachey.

NOTES FROM NICE.

The wild flowers are certainly in great "abundance," and though from the increase of buildings and consequent enclosure of land, they are not to be now met with so near to the city, yet the market is profusely and cheaply supplied with them, and also with cultivated floral beauties. The leading sorts are Anemones of various colours, Hyacinths, Narcissus, Stocks, Wallflowers, Primulas, Violets, Roses, Lilac, &c.

It has been ascertained at Nice that the leaves of the large scarlet Geraniums, which grow there so extensively in the open air all the year round, have very useful healing properties when applied in various forms to wounds and bruises. The leaves are placed over the parts affected, or made up into a plaister and laid on as may be needed.

Medical Dairy.—This title sounds rather oddly, but it is nevertheless a fact, that there has, amongst other novelties at Nice, been recently established a dairy under this name, and it is stated that it has introduced a new system of taking medicine homœopathically, so as still further to carry out the minimisation of infinitesimal doses. Goats are kept, and when any patient requires a particular medicine it is first administered to the animal, and some of the milk afterwards taken by the invalid. Some goats are kept for particular medicines, so that there is the belladonna goat, arnica, camphor, &c.

Comparative Temperature.

1875.	London.		Nice.	
	Max.	Min.	Max.	Min.
March 3rd	38	31	54	39
,, 4th	42	29	52	42
,, 5th	44	27	54	41
,, 6th	49	31	54	38
,, 7th	58	40	54	44
,, 8th	57	49	57	42
,, 9th	55	49	57	48
Totals	343	256	382	294
Mean	49	36	54	42
Average difference in favour of Nice	5	6		

—E. Copland.

ROYAL HORTICULTURAL SOCIETY.

I was much surprised to hear from the Chairman at the adjourned meeting of this Society on the 9th inst. that the opinion of the larger exhibitors at the four minor shows had been taken, and a committee formed for the purpose of inquiring into this special matter. Now I think it is pretty well known in the horticultural world that the firm of which I am the sole surviving partner were the originators of the spring exhibitions at the Royal Horticultural Society, and further, I personally made out the first schedule issued by the then Council, and we have been very large and successful exhibitors at these shows, as their prize list will testify, and for the past two seasons we have not been out in the cold at the Chrysanthemum Shows, and I have the presumption to assume that if anyone had been consulted amongst the exhibitors that Wm. Cutbush & Son of Highgate would have been in the party.

I do not desire to add fuel to the already fierce fire at South Kensington, but having had a message conveyed to me from one of the leading members of the Council through my good friend and neighbour Mr. B. S. Williams only one day after the Council had decided to withdraw the four minor shows, already advertised in the schedule for 1875, that the Hyacinth Show would not be held, and to save any expense or inconvenience to me the information was thus kindly conveyed. Not being fully satisfied, I wrote to the office, and received a reply from the Assistant Secretary, dated 13th of February, that it had been decided not to hold the Shows in March, April, September, and November. Placing full confidence in this and subsequent advertisements, I at once arranged to put back our collection of Hyacinths and early Tulips for an exhibition here at Easter, and which will, if all is well, be carried out. Judge, then, of my astonishment, one week only before the original date announced for the Hyacinth Show, to hear that the Council had changed their minds, and would, with certain reductions, hold this and the other three Shows.

I ask, Does the Council consider this justice to an old exhibitor and staunch supporter of the Society? Had the Council condescended at the first to have called the exhibitors together and stated the position they were in, I am quite sure there would have been found but one opinion amongst the trade exhibitors—"Hold all your Shows, pay the prizes you offer to the amateurs, and we will for this season do our best and support you *con amore*."

It is very hard upon amateurs as well as ourselves in the case of the Hyacinth, for, relying upon the fact of a schedule being issued, purchases were made of expensive sorts on purpose to exhibit, as they are of little use after. In general, for decorative purposes, a ninepenny or shilling bulb produces as good an effect, and I know many of our own clients are exceedingly indignant at the vacillating policy of the Council. If this is to be the course the Council mean to adopt—play at battledore and shuttlecock with the exhibitors—there can be no unanimity betwixt horticulturists and themselves.—James Cutbush, *Highgate Nurseries.*

ECONOMISING FLOWER POTS.

How to enclose a little bit of mother earth in which to grow a plant, and at the same time keep it in a portable state, seems at first sight a very simple problem indeed, and one which may be solved in a multitude of ways. Where only a few plants are concerned little difficulty is experienced, but when the few become thousands the accumulated little difficulties go to make up one so great that with many a flower-pot famine is an event which happens almost annually about this season, and it may therefore be worth while to take stock of some of the ways and means of meeting it. In the case of bedding Geraniums—and it is to them only that my remarks will apply in the meantime—many methods have been tried with the view of economising pots and space. But the best of them seem to me to be failures so far as true economy is concerned, pots being in the end by far the cheapest, entailing the least labour, and giving the most satisfaction.

One of the best substitutes are long narrow boxes about 7 inches wide by 6 inches deep, made of three-quarter-inch boards. This width will hold two rows of Geraniums, each row being placed about an inch from the side, and it is best to plant them not triangularly, but in pairs. The great disadvantage attending this boxing system is, or rather was, that at planting time it was almost impossible to remove them with anything like good balls, but this is now obviated in some measure by a variety of ways. One is to have a quantity of good sound turf about 2 inches thick, and free from perennial weeds, laid up in autumn and allowed partially to rot, though not to such an extent as to destroy the fibre. In preparing the boxes place a layer of this in the bottom with what was once the grassy side downwards, keeping it as whole as possible. Over this place a little soil, and then put in the plants in the usual way, and in due time they will root into the turf.

At planting time pretty good balls can thus be obtained by making a cut along the middle of the box, and across between

each pair of plants. For greater convenience at this time the boxes should be made with the sides nailed on the outside of the bottoms and ends, and in one side at least as few nails be used as possible, which side can be removed to allow of the plants being more easily removed. It is also a good plan to cut off a number of the largest of the leaves a few days before they are to be planted.

Another way is to cut up good tough turf into cubes of about 3 inches, and scoop a hole in each with a knife to receive the plant and a little fine soil, placing them afterwards closely packed together either in beds or boxes. When it is found necessary to increase the stock of Geraniums by propagating in spring, this method of afterwards accommodating them is preferable to the other.

A plan more satisfactory in its results, although giving more labour in the first instance, is to treat them as follows:—Provide a quantity of green moss, not sphagnum, for that is too retentive of moisture for the purpose, but some of the Hypnum species which is found growing plentifully in the woods, on trees and stones, and which can be removed in thin fleeces. If the plants to be treated are shaken from store pots, the surest way is to take a 4-inch pot and line it with a flake of the moss, then pot the plant in it rather firmly, and when this is done cover the surface of the soil with another thin flake, and then turn out the now moss-enveloped ball by giving the pot a smart tap on the edge of the bench. It is afterwards bound together by winding a strong strand of bast three or four times round it. These being packed in beds or boxes with a little soil between them are not unhandy at planting time, and do not experience much of a check. Of course the moss is never removed. With plants that have been potted off in the autumn, two in a pot, the same end is more easily attained, as the balls only require to be halved and each wrapped up in moss, care being taken that they are not too dry at the time.

Some very curious vessels are sometimes met with in cottagers' gardens and windows doing duty as flower pots, yet feats of plant-growing are often performed in these, which for grandeur of results as compared with the grotesque unsuitability of the appliances, may be compared with the feat of the tuneful French fiddler who could extract exquisite music from a wooden shoe.

One of the best Petunias I saw last year was a balloon-trained plant grown by an amateur in an Australian meat tin, and a worthy farmer with floricultural tastes whom I know, grows fairly good Zonal Pelargoniums in old sheep-dip jars.

Not long since I saw in Glasgow a hoary Saxifraga sarmentosa luxuriating in an ancient brass kettle suspended in a shoemaker's window. Doubtless this kettle had in its day done duty in many a stiff toddy brew, but its steaming days were done, and here in its old age it was calmly, usefully, beautiful. —Robert D. Taylor.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

Gustavia gracillima. *Nat. ord.*, Myrtaceæ. *Linn.*, Monadelphia Polyandria.—Flowers light rose-coloured. "It is a native of New Grenada, where it was discovered by Purdie in the woods of Carmin, in 1845, forming a singular small tree flowering on its slender lofty trunk in July. In Mr. Bull's establishment at Chelsea it flowered in September of last year." —(*Bot. Mag.*, *t.* 6151.)

Masdevallia chimæra. *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria.—Flowers yellow, densely spotted with crimson. "It is a native of deep valleys in New Grenada, where it was discovered by Roezl, and imported by M. Linden in 1872. Mr. Bull flowered it in December last."—(*Ibid.*, *t.* 6152.)

Colchicum luteum. *Nat. ord.*, Melanthaceæ. *Linn*, Hexandria Trigynia. Flowers pale yellow. "It is a native of the mountains in the extreme West of India beyond the Indus, in Hazara, at an elevation of 7000 feet, where it flowers in December and January. An apparently identical plant has been gathered by Dr. Thomson, F.R.S., in the valley of Kashmir, at an elevation of 5-7000 feet, flowering in June; by Stocks in Beluchistan; and by Griffith, who is the discoverer of the species, in Kafferisthan, near Otipore, about the year 1840, flowering in April at an elevation of 6-7000 feet. It has also been gathered by Stocks in upper Beluchistan, and by Henderson in the Zoji pass in Kashmir."—(*Ibid.*, *t.* 6153.) It is hardy, and flowered at Kew in January.

Theropogon pallidus. *Nat. ord.*, Liliaceæ. *Linn*, Hexandria Monogynia.—Flowers very pale pink. "A very common Himalayan plant, from Kumaon, alt. 6000 feet, to Nepal and Sikkim, in which latter country it ascends to 10,000 feet; also common in the Khasia mountains, where it is found at 5-6000 feet towards the tops of the hills. It prefers mossy rocks and the bases of old trees, when the roots run rather superficially in the loose soil."—(*Ibid.*, *t.* 6154.)

Wahlenbergia tuberosa. *Nat. ord.*, Campanulaceæ. *Linn.*, Pentandria Monogynia.—Flowers white with pink streaks. "The tuberous rootstock resembles a cluster of small Potatoes placed on the top of the pot; the contrast of these grotesque objects, with the exquisitely graceful thread-like stems and profusion of pearl-white rose-streaked blossoms is exceedingly striking, and recommends the plant as a most desirable one for greenhouse and probably out-of-door culture. Of course care must be taken not to overwater the plant when past flower, or the tubers will soon rot.

"Messrs. Veitch had it in full flower in September of last year. They received it from Juan Fernandez, where it was discovered by their collector Mr. Downton in 1873."—(*Ibid.*, *t.* 6155.)

Cydonia Maulei.—A hardy deciduous shrub. "It is a native of Japan, and was first publicly made known by Messrs. Maule on the occasion of the visit of the Royal Horticultural Society to Bath in June, 1873, when a drawing of the plant, with samples of the conserve made from its fruit, was shown under the name of a Japanese species of Cratægus or Pyrus, and received a first-class certificate. The yellow fruit is roundish, slightly depressed both at the eye and stalk, and bluntly but indistinctly ribbed, while the five-celled interior contains numerous seeds or pips.

"The affinity of this charming plant is obviously with Cydonia japonica, the Japan Quince, one of the most ornamental of flowering shrubs, but it differs from that well-known species in the form of its leaves, and in the structure of its flowers and fruits. Mr. Maule informs us that it will not take when grafted on the Pear, but will do so on the Apple, and also on the Thorn.

"As a hardy ornamental deciduous flowering shrub this plant has few equals, its brightly-scarlet flowers being so abundant and so remarkably effective. They are freely produced early in May, and as we learn from Mr. Maule, the plants go on blooming without intermission till June, so that in the event of frosty weather there is always a succession of blossoms, some of which must escape injury."—(*Florist and Pomologist*, 3 s., viii., 49.)

Apple.—*Lady Henniker.*—"It is of the Codlin shape, the fruits being high, inclining to conical, and obtusely angular. The eye is small for such a large fruit, open, and placed in a deep angular cavity. The stalk is short and deeply placed. The skin is of a deep straw colour on the shaded side, light brown where exposed, and streaked with bright crimson, with a small patch of russet near the stalk. The flesh is of a pale yellow, firm and tender, of a brisk, sub-acid flavour. It is very excellent when cooked; and is in season from October to Christmas.

"It is a seedling raised by Mr. Perkins, the gardener to Lord Henniker, at Thornham Hall, Eye, Suffolk, and was awarded a first-class certificate by the Royal Horticultural Society."—(*Ibid.*, 61.)

HYACINTHS AT HOME.

Wm. Cutbush & Sons, Highgate.—We would that this charming spring flower had a place in every home small as well as great, humble as well as exalted. We note it now in one of the great homes, for is not the name of Cutbush and the Hyacinth inseparable? It is from the hilly retreat of this old-established nursery that some of the most splendid specimens have been exhibited.

It was here, we believe, that the idea of spring exhibitions first had birth, and which resulted in displays which have been and ought to be again amongst the gayest and the sweetest of the whole year's displays. If the public have not had spread before them the usual contributions of this nursery it is from no lack of will, much less from any deficiency of skill on the part of its head; yet, if Mr. Cutbush has been misled and his plants perforce kept, as it were, in ambush, he does the next best thing in his power—viz., if he cannot take his plants to the public he invites the public to visit his plants.

His home exhibition commences on Easter Monday, and we

can promise those who contemplate an escape from the din of the town—we can promise those dwellers in the country solitudes who employ a holiday in search of something good in the way of flowers, that a run up to Highgate will be well worth the time it occupies. They will find what we did not find—the plants attractively arranged. Ours was to view the work in progress, theirs is to see it perfected. We saw the spikes, and pronounce them fine; we saw the Liliee, and bespeak them excellent; the Camellias clean and glossy; the Azaleas—handy plants—profusely clothed with bloom; the Cytisus Atleeanus glowing, the Palms stately and elegant. These with other decorative plants are being put under tribute to make this home show attractive.

But as the Hyacinths hold the post of honour, the other plants being accessories—framework, as it were, for the setting of the picture—we will note some of the best, for growers generally to note again what best will give them a reward in return for sound and generous treatment. And first in respect of new introductions Mr. Cutbush has none to offer.

Of late years the importations of new varieties have had so much chaff mixed with the few grains of corn that the veteran grower has resolved to import no indifferent sorts, and has made a resolve to visit Holland in the blooming season and determine the merits of novelties before addiug them to his collections. He will neither add a new one nor reject an old one simply because it is such, merit and quality being his primary object.

Some of the finest of the dark blues are Argus, Baron Van Tuyll (fine), King of the Blues (extra), Lord Melville (very telling), Marie (immense spike). Of the light blues Czar Peter (excellent), Blondin (greyish, charming), Couronne de Celle, Grand Lilas, Orondates, Charles Dickens, and Pieneman (immense bells). The best of the nearly black varieties are General Havelock, Feruck Khan, La Nuit, and Mimosa. The most attractive amongst the reds are Garibaldi (very rich), Linnæus (bright), Lina (fine), Madame Hodgson, Mrs. Beecher Stowe, Prince Albert Victor (extra), Florence Nightingale (Fabiola), and Solfaterre. The best of the whites are La Grandesse (superb), Baron Van Tuyll, Alba superbissima, Grandeur à Merveille (flesh), Mont Blanc (very fine), and Queen of the Netherlands. The best yellows are Duc de Malakoff and Ida. Mr. Cutbush's nursery if not extensive is interesting; everything is in good order, the whole place evidently being under able supervision.

Messrs. Veitch & Sons, Chelsea.—Our next visit is to another great home of the popular spring flower, for as such the nursery of Messrs. Veitch & Sons has an undisputed claim. The firm did not enter the competitive lists at South Kensington, and thus we were unable to offer our customary meed of instruction to those who cannot for themselves see a great collection in bloom, and who turn, as a guide to selection, to the Journal's portraiture of the most striking flowers.

These flowers are the great feature at the present time, and, as seen in our advertising columns, an inspection of the plants is invited by Messrs. Veitch. We invite a free response, as a floral feast is spread which cannot but be enjoyed, and which will haunt the memory almost, or quite, until the Hyacinths come again next year. We will briefly note a few of the best, and will first glance at the new varieties.

In this small group Duchess of Edinburgh must head the list. It is a single variety, having a finely-built truss closely set with well-formed waxy bells, and is of an extremely delicate pink or flesh colour. Disraeli is a blue flower, with faint streaks of white at the edges of the petals; it has a beautifully-shaped truss, and is very promising. Baron Beust is somewhat similar to the preceding, but more white in the petals; it is a charming colour, with a rather thin spike. Princess of Wales is a semi-double pink-coloured variety, with a fine towering spike, and very attractive. Prince Tallyrand is a porcelain blue, with large bells of great substance and a medium-sized spike. Masterpiece is nearly black, with a plum-coloured bar down each petal; it has a fine-shapely spike, and is well to the front of its class. Negro is also a good black and maroon variety. Oriental Beauty is a pure buff in colour, having a dense spike and good. Queen of Naples is in the way of Von Schiller, but a shade deeper in colour; it is a promising variety, but the present plant is deficient in foliage.

Amongst the general collection of two hundred splendid examples of culture we notice the best of the reds to be Prince Albert Victor. It is a rich scarlet crimson, very telling and fine. Vurbaak is another exceedingly fine variety of the same type. Linnæus is a bright carmine, and an excellent sort. Of the lighter shades of red the best are Macaulay, carmine rose; Van Schiller, salmon pink; Koh-i-noor, semi-double pink; Fabiola, creamy pink, beautiful; and pink Charles Dickens.

Amongt blues King of the Blues is pre-eminent, followed by General Havelock, very dark; and the good old varieties Mimosa, purple; and Baron Van Tuyll, dark blue. Of the lighter shades the most attractive are Czar Peter, lavender mauve, very handsome; Lothair, pale blue, excellent; Blondin, a silvery blue, fine bells and spike; De Candolle, lilac with blue stripes; and the still good porcelain blue variety Grand Lilas.

The best of the whites are La Grandesse, a magnificent spike and fine bells; L'Innocence, very handsome; Snowball, wonderful substance, but short spike; Mont Blanc, massive and pure; Madame Van der Hoop, and the old favourite blush Grandeur à Merveille. Miss Nightingale is a fine double white, the bells being almost as large as Gardenias, and fine for wiring for bouquets and button-hole decoration.

Of the yellows the best are Bird of Paradise, bright and fine; and Ida, primrose.

Those are, in brief, the cream of the splendid collection now staged at the nursery, and in conjunction with the Tulips, Crocuses, Narcissus, Clematis, &c., the feast of beauty is rich, varied, and satisfying.

The varieties enumerated are the best of two grand collections, leaving out of the list, however, many others of nearly equal merit. They comprise old as well as new kinds, and are adapted to varying requirements and decorative purposes.

IRIS GERMANICA.

In mentioning the Iris we have in hand one of the most varied and most beautiful families of hardy plants. It is assuredly true that there is no class of plants in the temperate zone and very few examples from tropical climes that can unfold to the eye of the florist such an extreme range of colour, such varieties of tints, such delicacies of markings, such decided richness in body colour as the different types and sections which the Iris affords; in fact its very name is expressive, being derived from the eye, in allusion to the variety and beauty of the colours of its flowers.

The genus Iris has long been a great favourite in the flower borders of Europe, and until the last few years was plentifully found in almost every garden of note in Britain. It has, however, in common with many other border flowers lost caste as it were in the estimation of the new-fashioned florists who, trained under the "bedding" *régime*, where individual beauty was lost in the effect of gorgeous massing, and intrinsic excellence was set aside for symmetry of combination, were taught to regard our hardy plants as little better than cumberers of the ground: hence the Iris has fallen into something like general disuetude, but is yet far from lost. There has always been a few real flower lovers with strength of mind sufficient to enable them to battle successfully against the stream of fashion, and to fight a winning battle in preserving their favourites from being rushed into its devouring vortex. These have now the reward of finding their labours appreciated in the returning taste for the flowers which our forefathers loved to enjoy.

It must be so. The very nature of our constitution as a nation is to cherish all that pertaineth to us by the care of our predecessors, and to hand it down to posterity the better for our having it. That is a national trait, and however tastes may vary and new ideas find patronage the quality of conservation has deep root, and will assert its power in spite of passing obstacles which now and again may intervene and gain a momentary triumph. Not that the new is a necessary evil, and that improvements are to be slighted as mere innovations; not that the taste in floral combinations which has added a charm to many an enjoyable home is to be spoken of slightingly; not that the prevailing system of garden decoration would be relegated to the limbo of oblivion by one barbarous swoop. No! not that. Let it flourish with all the charms it possesses, and improve and give pleasure to the fullest extent of its capabilities; let it do all that, but let the old plants live and improve too. Let them be loved and cherished, and improved, and increased; not only tolerated, but admired; not only permitted to exist, but assisted to perfect themselves as friends worthy of a home and protective care. That is what we desire to see, and desire it because of the solid lasting satisfying pleasure this care would create. Our homes may be beautiful as ever by judicious combinations of systematic form

and coloration, but would have the additional feature of interest in the cultivation of beautiful flowers for the sake of their own individual and intrinsic attractions. It would, too, spread flowers where they are not now to be seen, and make many a dark spot of earth bright and pleasant and sweet. That is why we seek to popularise our hardy flowers as well as to preserve the use of and improve the taste in the disposition of everything that makes our gardens an integral and indivisable part of our homes.

The great family of Iris, of which we figure the most familiar type, is in its various forms calculated to add to any garden an interest and a charm it did not possess before.

Fig. 56.—Iris germanica.

They unfold their glowing colours at a period when such colours are scarce, and in the spring and early summer months present a richness that the gayest occupants of the conservatory and stove cannot possibly surpass. Thanks to the care of the admiring florist and to the enterprise of floral caterers, the Irises so far from being lost are offered in a variety not even approached when the flower was in the first stages of its popularity. The German Iris, which was then limited to blue, purple, and white, can now be had in collections of fifty or more named varieties, including almost every colour and tint that can be imagined.

This section are hardy herbaceous perennials, evergreen, and of the easiest possible culture. They are not at all particular as to soil, and will flourish well in any fairly good ground. They have further this great advantage, that they will flourish, at the least as well as any other flower, in the neighbourhood of large towns where most plants under the smoke-defiled atmosphere linger and die. They are increased by root-division, and the present is a good time to establish collections. They also divide well after the blooming period in May. They are admirably adapted for planting by the side of carriage drives and for shrubbery ornamentation, where they increase and flower year by year with very little care and attention. To furnish cut blooms for filling large vases they have at their season few if any equals as hardy flowers. The blooms if cut when one-third open will travel well, expand, and continue fresh in water for several days. Most of them have a delicate perfume, and are deserving a place in all gardens of town and country. They have further the property which at times is so useful of growing and blooming well under the shade of trees. This section grows to an height of 2 to 3 feet. It is unquestionably a fine old garden plant, and there we leave it.

We would now notice a few others perhaps still more beautiful than the above, and adapted to different modes of culture and decorative purposes. Their dimiuutive growth renders some of these particularly suitable for pot culture, for which purpose they are highly commendable. What have we—what can we have more richly beautiful and at the same time sweetly perfumed than the early-blooming I. Reticulata? This variety has every claim to become popular as a spring-blooming conservatory plant, where it may be had in bloom in February. At that time nothing can compare with its deep blue flowers. Bulbs of this should always be ordered with the Hyacinths, and planted three or more in a pot, and they will give a reward commensurate with any care bestowed in cultivation. For pot culture a portion of old peat mixed in the soil is an advantage, but is not a necessity, as the variety will grow in any ordinary light soil. It will grow equally well in the open border, being perfectly hardy, and is one of the most attractive spring-flowering bulbs that can be grown. It blooms freely in March or April, and used in quantity no dwarf plant at its season has a richer effect. Its height is less than 6 inches. This variety is not yet common, but its intrinsic merits when better known will demand its increase. It is not of recent introduction, having been sparsely cultivated in English gardens for fifty years. Allied to this is the still older I. Persica. This is an exceedingly rich-coloured sweet-scented variety, adaptable for in or outdoor decoration, and being more plentiful and cheap than the foregoing should be largely grown.

Then follows the dwarf-growing group of Crimean or Austrian Iris. These are now offered in almost every colour, and make charming permanent edgings in suitable places in the spring garden or shrubbery. They are perfectly hardy, and will flourish in ordinarily light drained garden soil.

The numerous varieties of Spanish Iris, which are of intermediate growth yet later in blooming than the foregoing, by their rich contrast of colour will add a tone of brightness to the garden wherever they are cultivated. These vary from pure white to rose, deepening to blue, purples, clarets, and crimson, and afford a choice for cutting from as to be almost indispensable for this purpose. They flower usually in June, and are fine in groups for the mixed border.

A very charming variety for pots is the Peacock Iris (Viensseuxia), its white ground and purple blotch being distinct and effective. I. Susiana is a distinct, hardy, and remarkable striped variety, growing to a height of 2 feet, while the curious I. tuberosa (Snake's-head Iris) is singularly distinct and interesting for pots. While we have not enumerated a tithe of the many varieties of this fine hardy genus, not having even mentioned the great Japanese type of I. Kæmpferi, sufficient has been said to indicate the extreme variety of form, colour, time of flowering, and decorative adaptability which the family possesses. For varied and attractive qualities, for hardy constitution and easy culture it is difficult to name any other class of plants which equally embrace these advantages. They are recommended to all who love flowers. There is no place in a garden in which one or other of the kinds will not flourish. By the sides of streams or in woodland walks the larger sorts are at home. For choice spots and favourite nooks the smaller sorts will flourish and give pleasure, and for mixed borders the Spanish varieties will give enjoyable variety. For the greenhouse and conservatory a portion of them are worthy, and for indoor decoration as cut flowers all are to be placed in the front ranks as particularly and pre-eminently suitable. When once the richly varied collections of Irises are brought under general and systematic cultivation a feeling of surprise will become engendered that these beautiful hardy plants have been so long neglected.—W.

STANHOPEA.

This is a singular and extremely beautiful genus of epiphytal Orchids. The pseudobulbs, as may be seen from the woodcut, are furnished at the top with a solitary leaf, which is leathery in texture and has prominent midribs. The flowers emit a powerful odour; a single spike of three or four flowers will scent a very large house.

There are more than three dozen species and varieties in cultivation, but none of them are much valued by Orchid fanciers. The flowers do not last more than a week in beauty,

nor are they of any value for the purpose that the largest proportion of flowers are grown at the present time—viz., for cutting either for bouquets or decorative purposes in the house. The scent is too powerful when the flowers are placed in close rooms; nevertheless their large size, singular formation, and brilliant colours make them generally interesting, and they are valued by all who really love flowers for their own sake and are not ruled by the fashion of the hour.

Fig. 57.—Stanhopea tigrina.

None of the species can be said to be shy in flowering; with ordinary stove culture they flower every year during the summer or autumn months. In a recently published botanical dictionary pot culture is recommended for them; but if this system is followed out the plant must be raised very high above the rim, or the flowers will make a struggle to open amongst the drainage at the bottom of the pot.

The best way to grow them is in baskets made of teak, and the spaces between the strips of wood should not be less than an inch. On one occasion we had the care of some excellent specimens, which were grown in shallow baskets, but the pieces of wood were too close together, and the spikes of flowers which grow out at the sides or bottom of the basket could not get through.

The best material to fill up the baskets with is tough fibrous peat, sphagnum, and potsherds in equal proportions, with a

few lumps of charcoal added. Before filling the baskets a layer of potsherds should be placed in the bottom, and over it some clean live sphagnum; the moss that is mixed with the compost should also be fresh. The base of the pseudobulbs should just be covered when the plant is put into the basket.

The Stanhopea is not very subject to the attacks of insect pests. Red spider, however, is occasionally troublesome in hot weather, but a free use of the syringe and tepid water will either prevent their attack or dislodge them after they have gained a footing. When the bulbs are matured water should gradually be withheld, and they should only have enough to prevent them from shrivelling.

S. TIGRINA is one of the finest of the species. The flowers are very striking and handsome; the ground colour is orange, irregularly spotted with reddish brown. It is a Mexican species, and was introduced in 1836. Dr. Lindley observed that the flowers of S. tigrina are larger and handsomer than those of any other known species, even exceeding those of the magnificent S. Devoniensis. It flowers in August. Mr. Bateman states that it was originally imported from the neighbourhood of Xalapa by Messrs. Lowe & Co., and that it is among the easiest of the genus to cultivate. The fragrance of the flowers is very peculiar, resembling a mixture of Melon and Vanilla.

LONG-STEMMED AURICULA.

A CORRESPONDENT in the Journal of March 11th writes about a long-stemmed Auricula, and "D., *Deal*," gives him no satisfaction.

Some varieties, such as Martin's Mrs. Sturrock and Campbell's Lord of Lorne, are very prone to make long bare stems. In my judgment your correspondent may safely shorten the stem, and replant as deep as the leaves.

If the stem is furnished with roots so far as it is under ground, let him look for a slight contraction of the stem, somewhat like the joint of a finger, and here he may cut. Let him dip the stem in powdered charcoal, and let the cut base rest on the same. I have always found it necessary to be careful about the proper place for cutting the stem or tap root. Those contractions I speak of seem the best place for a new point of departure. Of course your correspondent will take care to preserve a sufficiency of roots; and I would not recommend the operation to be performed except in May or end of July.—FREDERICK TYMONS, Clk., *Cloghran*.

DALKEITH.—No. 3.

ALTHOUGH there is no flower garden proper at this fine place, yet there are flowers in immense quantities in the first order as to culture, and extremely effective as to taste in arrangement. These are planted in borders contiguous to the glass ranges and bounding the walks of the kitchen garden. No great variety of plants are used, but rather large quantities of the few which flourish the best, and are the most distinct and suitable are cultivated.

It will not be necessary to detail the mode of planting, yet, as giving a general idea of extent and arrangement, we notice the 10-feet-wide borders on each side of a broad walk 460 feet long. These are scolloped back and front, and have a row of circles 6 feet in diameter down the centre. These circles were filled with Lobelia speciosa, having a centre plant of Centaurea; the scollops being filled with Cerastium, Gazanias, and Geraniums Manglesii, Amy Hogg, Trentham Rose, &c. Another walk, 350 feet long, has similar borders, but planted differently. Ageratum, Crimson and Purple King Verbenas, Dactylus glomerata, and the still fine old Geranium Trentham Rose being mainly used. These borders are broken by several detached beds.

We take, as an example, a large circle raised to a height of about 4 feet at the apex of the bed. It was planted as follows: The outer line (15 inches) with Sempervivum californicum, followed by a similar width of Arabis lucida variegata; next, a row of large plants of Sempervivum tabulæforme, backed by a circle of Polemonium variegatum. From this circle the bed is divided into six panels, filled with Iresine Lindeni and divided by Polemonium running up to the centre, which is finished by a fine plant of Yucca aloifolia variegata. That is a grand bed, the luxuriance of the Iresine and Polemonium being strikingly effective.

We yet come to another walk with its flanking borders even longer and finer in effect than the others. In these the brilliancy of Tropæolum Cooperi was the telling feature. Even now I have not half enumerated the brilliant borders of Dalkeith, but some idea is given of their extent and richness. We now take a rapid run through the kitchen-garden department, extending to eleven acres under crops, and containing a large collection of all the best sorts of hardy fruits. There had been a fine crop of Pears on both walls and standards, some of the best sorts being in 1874 fully as fine from the standards as from the wall trees, such as Beurré Diel, Beurré Rance, Marie Louise, Williams's Bon Chrêtien, Duchesse d'Angoulême, Beurré de Capiaumont, &c., of which the fruit room contained good specimens. Apples were only a light crop, but the fruit was good in size and quality, although the light soil is not naturally well adapted for Apples, Plums, or Cherries. Small fruit had also been a very good crop, and large quantities of all kinds are grown, principally for supplying fruit for preserving.

With a liberal supply of manure, fine crops of vegetables are raised, the leading sorts being grown in large breadths to meet the wants of the establishment. Very few sorts of a kind are grown, good crops of good quality being more an object than mere variety. Most new vegetables of merit, or supposed merit, have a fair trial, but very few of them stand the test against older and well-tried sorts. Prominent amongst the newer vegetables is Veitch's Autumn Giant Cauliflower and Osborn's Forcing French Bean, both of which do well here, and have taken the place of older sorts in use at the same time. We noticed a large breadth of the "Dalkeith" Brussels Sprouts, a compact-habited and very prolific variety, that has been grown here for many years, and which has been found to keep in a bearing state longer than any other sort grown.

We observed a commodious gardener's house had just been erected, and further and better conveniences for the young men are contemplated, the Duke being proverbial in providing for the dwelling and comfort of all his dependents. The town of Dalkeith is of pleasant aspect, and evidences more than a common display of window gardening. This is at all times a pleasing feature, and a sure sign of the cleanliness, thrift, and intelligence of the inhabitants. The taste for domestic floriculture is no doubt fostered by a judiciously-managed Horticultural and Industrial Society, and the numerous gardens, both large and small, in the neighbourhood.

This closes our notes of what is undoubtedly one of the best, and best managed, gardens of Britain—a garden which a holiday gardener would do well to visit: he will see sound thorough practice rather than mere show, and will receive a courteous welcome from one of the most able and worthy members of the craft—the intelligent superintendent—Mr. Dunn.—J. WRIGHT.

NOTES AND GLEANINGS.

THE POTATO being a product of national importance, a Committee has been formed to give the utmost encouragement to its cultivation and improvement, and to promote the production of new and improved varieties, and to bring these more prominently before the public an exhibition is proposed to be held in London. We have seen the schedule of prizes, which are liberal, and when advertised, so that growers may see that the promoters are trustworthy, we have no doubt they will heartily respond.

—— DR. KALENDER of Linderhöhe, near Cologne, gives an elaborate account, in the *Kölnische Zeitung*, of the new enemy to the Potato which has caused such ravages in the Potato plantations of the United States—namely, the Colorado Beetle (Doryphora decemlineata). The general opinion on this beetle is rather uncertain at present, some considering it almost harmless, while others attach great importance to its being prevented from visiting Europe. Dr. Kalender applied to the Prussian Minister for Agriculture, and obtained the most reliable information, which is based upon a report of Mr. C. Riley, in the "Annual Report on the Noxious, Beneficial, and other Insects in the State of Missouri." It appears that the insect passes the winter in the ground, but as soon as the Potato plants have developed their first shoots the beetle shows itself. The females then deposit their orange-coloured ova, in lumps of ten to twelve, upon the under surfaces of the leaves; the larvæ appear after five to eight days, and begin their destructive work, which lasts two or three weeks, after which period they transform into nymphæ; ten to fourteen days later the young beetles appear; thus one summer can see three or four generations, of which the last one passes the winter in the ground. The insect does not confine its devastations to the

Potato only, but has also been found to attack the young shoots and leaves of Cirsium lanceolatum, Amaranthus retroflexus, Lisymbrium officinale, Polygonum hydropiper, Solanum nigrum, Chenopodium hybridum and album, and even of Hyoscyamus niger. This variety of plants shows that the insect has great powers of adapting itself to its food, and to this it must be ascribed that it can only with the greatest difficulty be got rid of. The home of the insect was in the Rocky Mountains; with the westward progress of agriculture the cultivation of the Potato approached the birthplace of the insect, and it transferred its dwelling to the Potato fields, which of course were welcome food; thus in a short time it became a general plague. In 1859 it began its eastward progress, and has now reached the coast of the Atlantic; whether it will cross this ocean and begin its devastations in Ireland remains to be seen; much may, however, be done to prevent its appearance in Europe. The means used for its destruction are various; the most successful one has been the so-called Schweinfurt green (arseno-acetate of copper). This is mixed with flour and water, and the plants are sprinkled with the mixture. Although highly poisonous to animal life, the Schweinfurt green does not poison the soil, as it is perfectly insoluble in water, and the destruction of the noxious insect is almost complete. Dr. Kalender finally draws the attention of agriculturists to another Potato enemy, the Brystopha solanella, a minute moth which has made its appearance in Algeria; its larvæ completely destroy the Potatoes themselves, so that they become unfit even for pigs' food. The *Journal de la Société Centrale d'Horticulture en France* warns seriously against the importation of Algerian Potatoes.—(*Nature.*)

—— Among the late Prince Consort's many excellencies was a love and a superior taste for gardening. How highly appreciated is thus well told in one of his letters in the interesting "Life" just published. "As an art modelling is even more attractive than painting, because in it the thought is actually *incorporated;* it also derives a higher value and interest from the fact that in it we have to deal with the three dimensions, and not with surface merely, and are not called upon to resort to the illusion of perspective. As the artist combines material and thought without the intervention of any other medium, his creation would be perfect if life could also be breathed into his work; and I quite understand and feel with the sculptor in the fable, who implored the gods to let his work descend from its platform. We have an art, however, in which even this third element of creation—inward force and growth—is present, and which has, therefore, had extraordinary attractions for me of late years, indeed I may say from earliest childhood—namely, the art of gardening. In this the artist who lays out the work, and devises a garment for a piece of ground, has the delight of seeing his work live and grow hour by hour; and while it is growing he is able to polish, to cut and carve, to fill up here and there, to hope and to love."

—— Every member of the vegetable world in California is described as "vast" or "gigantic," and the following is another example published in the *San Francisco Alta.* "It has been supposed that the Sierra Sequoias, or big trees of California, are confined to a few small and isolated groves. It was discovered last summer that a body of big tree timber in Fresno county is not properly a grove, but a forest extending for not less than seventy miles in a north-west and south-eastward direction, with a width in some places of ten miles, and interrupted only by the deep canons which cut across the general course of the forest. Different persons have traced the forest from the basin of the Tule river in latitude 36° 20′ across those of the Kaweah and Kings to that of the San Joaquin. The elevation has not been carefully measured, but is supposed to vary from 4000 feet to 6000 feet. Unlike the groves further north, this forest consists mainly, and in some places almost exclusively, of the big trees, and there are also a multitude in all the ages of growth, some just sprouting and others saplings only 2 or 3 feet through. The largest standing tree as yet measured is 40 feet in diameter; a charred stump—the tree itself having disappeared—measures 41 feet across. A tree 24 feet in diameter 4 feet above the ground is precisely the same thickness 60 feet higher. A fallen trunk is hollow throughout its length, and the hole is large enough to drive a horse and buggy 72 feet in it as in a tunnel. The wood is similar in general character to the coast Sequoia, or common Redwood, straight in grain, splitting freely, even enough in grain for furniture, and far superior to Oak in its keeping qualities in positions exposed to alternations of drought and moisture. The Sierra Sequoia does not throw up sprouts from its stump as does the Redwood, and can therefore be felled out more readily. It was wise in Congress to make a reservation for pleasure purposes of the Mariposa Grove, which is near Yosemite, small and conveniently accessible to tourists by the present routes of travel; but the Tulare-Fresno forest—it is all in those two counties—cannot be converted into a public reservation. Numerous sawmills will be built on its line, and flumes will carry the lumber down to the consumers."

NOTES on VILLA and SUBURBAN GARDENING.

Kitchen Garden.—If previous advice has been acted upon—that is, if the soil of the garden has received its preparation by digging, trenching, manuring, &c., it will be found in an excellent condition to receive the seeds of various crops which ought to be now sown. The plan still adopted by many, notwithstanding that instructions are given to the contrary, of digging and manuring the ground at the time of cropping, is not giving the crops a fair chance. The aim of the owner of ever so small a garden should be to so work his soil as to have it in the best possible condition at cropping time, and this cannot be well done unless it is turned up in a rough state during the autumn, when it becomes pulverised and cleansed by the severity of the winter. A soil so treated will now be found to work down admirably, and it will not be bound down or thrown out of condition by being trampled upon during the process of cropping.

There is another matter I ought to mention, which is that some crops, such as Potatoes and Onions, do not turn out so well with manure applied at the time of cropping, especially if that manure is at all green or not much rotted down. The object should be to apply the manure at the earliest opportunity, and in such a state of decomposition that it can be appropriated by the crops at the time it is needed for their development. But there are some who will not move out of their usual track to benefit themselves, even though there is the prospect of increased produce from other and better plans which have been advised.

It is now time to make sowings of the general crops, to be grown whether the garden be large or small. If early Potatoes have been planted on warm borders watch for their coming up and protect them from frost, a little of which we are having every night. Plant Myatt's Prolific, American Early Rose, Brezee's Prolific, Early Shaws, York Regents, and Lapstone Kidney as soon as possible; the later sorts, such as Flukes, may be deferred later on if, as I presume, that all the space intended for Potatoes is not yet vacant, but if it is I would advise that all sorts be put in immediately.

As to the manner of planting Potatoes most of it is understood, but I do not advise anyone to adopt the plan of dibbling them in. It may save time, but it is the worst plan of any. The hole is made and the soil is compressed at the sides, which in a stiff soil is a greater disadvantage, because the roots are unable to obtain that freedom they need at starting into growth, and which is given them by adopting the plan of planting them either in drills or putting them in with the spade. And further, unless a very peculiar dibbler is used, the Potato does not go to the bottom of the hole, which is another disadvantage.

Of Peas there are many good sorts, both tall and dwarf growers. I should now sow a row of Veitch's Perfection and Williams's Emperor of the Marrows; the former grows 3 feet, and the latter 6 feet or more in good soils. If sown both at the same time they come in good succession, and are most excellent croppers and good in flavour.

Sow also the main crop of Onions on well-prepared ground, the White Spanish and James's Keeping are two good standard sorts. If it is necessary to manure the ground now use any old manure, but I prefer using the space occupied by Celery, as that being manured the year previously, and the ground being well worked, Onions generally do well. It being a deep-rooting plant a deeply cultivated soil is indispensable. Sow the seed in drills about an inch deep, and if the soil is light tread the seed in as it is covered. Those who grow the Giant Rocca and other autumn-sown sorts must now stir the soil between the rows and thin out where thick, and fill up vacancies by picking out some of the best.

Some early Horn Carrots to succeed those sown in frames or sheltered places may now be sown, leaving the main crop till the beginning of next month.

Plant a few rows of Broad Beans, either the Broad Windsor or Longpod; there is also the Dwarf Fan and Beck's Green Gem, both branching kinds and do not exceed 15 inches in height. These are excellent in quality and prolific.

If Spinach is required a few rows may now be sown, but this, being a crop which soon comes to perfection, should be sown between rows of Peas, yet on good rich soil. As its produce depends upon the size of the leaves, it requires thinning out to about 8 inches from plant to plant.

Make sowings in small beds or narrow borders of Brussels

Sprouts, Ulm Savoy, Couve Tronchuda, Cauliflowers, Enfield Market Cabbage, Paris White Cos Lettuce, Leeks, Radishes, and small salading. This may be followed up in another fortnight with small sowings of Snow's Winter Broccoli and other winter and spring sorts; also the autumn sorts, such as the White and Purple Cape, and Veitch's Autumn Giant Cauliflower, Drumhead Savoys, and several sorts of Kales, such as Scotch Cabbaging, Tall and Dwarf Green-curled, and the Buda Kale, which is a most productive variety.

Plant out Lettuces that have stood in frames during winter under a wall or on a border of rich ground. The same may be said of Cauliflowers that have been so preserved, and those under handlights must have the soil stirred among them and be encouraged to grow as fast as possible.—THOMAS RECORD.

DOINGS OF THE LAST AND PRESENT WEEKS.

HARDY FRUIT GARDEN.

NOTWITHSTANDING the continued cold weather the flower buds on Apricot and Pear trees are rapidly swelling, and a few mild days will cause the blossoms to burst open. On south walls Apricot blossoms which are already open require to be carefully sheltered from the biting blast by canvas screens, rolling these up in the middle of the day.

In our variable climate wall trees require much watchfulness at the time of flowering; keeping the protecting material down when it is not required weakens the trees and is injurious to the blossoms. The enthusiastic amateur or careful gardener will watch for the opportunity to roll-up the canvas and allow the sun to act upon the trees. After a frosty night, some time between the hours of 9 and 10 A.M. is early enough to uncover the trees in exceptionally bad weather, such as snow or hail; indeed, we have sometimes had it so cold in March that the rain drops have frozen on the trees. They ought to be effectually protected.

We have commenced to run the Dutch hoe through the borders of pyramid and bush trees. The surface had become caked by the rains, and seedling weeds are appearing above ground. If the hoe is kept well at work at this season weeds are effectually destroyed, and require but little trouble to keep them in check in the summer months.

Those who are much troubled with the maggot that eats into the centre of the fruits of Apples and Pears, would do well to throw some dry lime over the trees after wetting the branches with soapy water thrown from a syringe or garden engine.

Pruned Apple trees that were planted in the winter. The best time to prune newly-planted young trees is when the buds begin to move in the spring. If they are wall trees they ought to be nailed at the same time.

FRUIT AND FORCING HOUSES.

Vineries.—The inside borders of late houses have been watered now that the buds are starting into growth. The plan always adopted with early houses is to water the borders at the time of starting; but this is done to warm the soil a little, as if the border is moderately moist, as it ought to be, there is not much to be gained by watering it before the Vine is quickened into action. Vine roots are not like those of Pears and other fruit trees of the same character, which are forming rootlets in fine weather all through the winter months. The Vine does not seem to make any fresh roots until the leaves are formed, the first start being made from the elaborated and stored-up sap of the previous season.

There is no danger now of the Vines bleeding from late pruning. The system of cutting the fruit with the branch attached is not only a convenient one but also commends itself, because it prevents the fruit from exhausting the Vine, which it does by draining the sap from it. The splendid Alicante Grapes that gained the first prize at South Kensington last week had been cut from the Vine for a considerable time, and some of the other exhibits which were in good condition had been cut for more than three months.

The unfavourable weather, as was to be expected, has brought some signs of red spider into the early vineries.

In the early stages of the attack the best way to get rid of the spider is to wash the leaves with a sponge and soapy water. This requires much care, as the berries are easily damaged by rubbing the arm against them. Applying sulphur to the hot-water pipes will kill the pest if the pipes are hot enough; but all tender-skinned Grapes are liable to injury from the fumes, and great care is necessary when it is being applied. Slaking a 10-inch potful of lime in the house and throwing a handful or two of sulphur on the smoking mass has also been tried, but this operation is much more hazardous than the other.

Many gardeners who produce good Grapes syringe the Vines up to the time of colouring. If this is done thoroughly the spider will be destroyed, but the appearance of the Grapes is also spoiled. Tying the shoots and stopping the growths in succession houses and other routine work has been given in detail in previous numbers.

CUCUMBER AND MELON HOUSES.

Some growers of Cucumbers recommend at this season a minimum temperature of from 60° to 65°, but one of from 70° to 75° is much preferable, as if the fruit is not grown quickly it is sometimes bitter. In our houses there are sufficient hot-water pipes to maintain a minimum of 75° even in cold weather.

The same plants continue in bearing for a long period by periodically cutting-out the old exhausted wood and renewing with the young growths. During the winter season once in ten days is often enough to go over the plants; in summer they require attention every week. When the plants are not growing freely they have a tendency to produce a very large number of male blossoms, and as these still further tend to check the growths they must at once be pinched-off.

Preparing plants for planting-out in frames is not included in our "Doings," as the house is much more convenient. There is not much to be gained by planting in frames too early in the season; but if good sturdy plants could be put out now and the frames double-matted at night, the plants would start fairly into growth. The fermenting material of which the beds are composed should be well prepared. Stable manure and leaves in equal proportions make a lasting bed.

Melons are making good growth, but the plants are not grown enough to require stopping. This is done when they have grown-up to about half the length of the trellis. A watchful eye is kept for spider, which soon makes sad havoc with the plants. Syringing it off is the best treatment.

Figs.—These, being grown in pots, are moved from the house where they are started to the back stages in the Cucumber house. When the trees are dormant at midwinter it would not be judicious treatment to introduce them to a temperature of 65° or 75° all at once, but they are started with the Vines and are removed from the house before they receive injury from the shade of the Vine leaves. It has been said that Figs will do well under the shade of Vines; they may do so if the roof is not well covered, but when the Vine trellis overhead is covered as it ought to be, any Figs that may be produced underneath are not worth the trouble of growing.

Tomatoes have been potted-on into 9-inch pots, and it is always worth while to devote some space in the forcing houses to them. Excellent fruit is produced in May and June by sowing a pinch of seed with the Melons in January. The plants should be stopped when they have grown about a foot high, and no more stopping is required.

GREENHOUSE AND CONSERVATORY.

Insect pests seem to increase so much more rapidly during the prevalence of east wind that some persons have concluded that they come with it, and not a few have been driven to the theory of spontaneous generation; but all observant gardeners know well that anything which causes the growth to receive a check is the means of introducing aphis more rapidly to the plants. Fumigating with tobacco smoke is the most effectual preventive as well as remedy.

The Hyacinths are now in great beauty, and with the gorgeous early-flowering Tulips serve to make the houses very gay. To grow Hyacinths and Tulips well they ought to be placed in a house near the glass until the flowers are nearly open; this causes the spike to stand up boldly above the foliage. Neat supports made of wire and painted green are the best means of supporting the spikes. The wires should be bent at the end that is thrust in the mould to preserve the bulbs from injury.

Stage Pelargoniums must also be attended to now by being kept quite free from green fly, and the plants must also be quite close to the glass if the finest health and quality are desired. Specimen plants must be tied-out carefully. If the shoots are strong they readily snap-off at the base. It is best to bring them down a little at a time, and rather go over the plants more frequently.

Primula amœna and the white and lilac varieties should be grown more frequently for the greenhouse. The white variety is now in flower, and the others will soon be in. It is a plant requiring but little attention. At or before the flowering period the leaves are frequently attacked by red spider, and if this is not kept off until the crowns ripen a good bloom cannot be expected the following season. The shadings have been put up, as the sun had begun to act with considerable force on the glass.

FLOWER GARDEN.

Rolled the lawn with a heavy roller, and as soon as possible will run the lawn mower over it. The grass is always rough and uneven before it is mown for the first time.

Have put up a turf pit for the bedding plants, and shall lose no time in getting them into it, as the late vineries now require a little heat and the house to be shut-up early, which is quite the opposite treatment to that required for the bedding plants.

Potting of Coleus, Alternantheras, and other half-stove plants. Indeed, it is best if the more tender of the above are not placed in the cool house until May, and then only if the weather is fine. Moved bedding Calceolarias from a cold frame to the

earth pit. The plants will be planted in the trench when they have been inured to their new situation.—J. Douglas.

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Jersey.—May 5th, Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.
Bath.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.
Coventry.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.
Durham and Northumberland.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.
Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.
Glasgow.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
Fareham.—June 23rd. Mr. H Smith, Sec.
Exeter (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.
Wisbeach.—June 30th. Mr. C. Parker, Hon. Sec.
Spalding.—July 1st and 2nd. Mr. G. F. Barrell, Hon. Sec.
Tonbridge.—July 14th. Mr. W. Blair, Free Press Office, Hon. Sec.
Wimbledon.—July 15th and 16th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon. Sec.
Brecon.—July 22nd. Mr. W. J. Roberts. Sec.
Cleckheaton.—July 24th. Mr. S. H. Williamson, Hon. Sec.
Preston.—July 28th and 29th. Mr. W. Troughton, 4, Church Street, Hon. Sec.
Southampton.—July 31st and August 2nd. Mr. C. S. Fuidge, 32, York Street, Lower Avenue, Sec.
Ramsgate.—August 25th. C. D. Smith, Esq., 8, Marine Terrace, Margate, Hon. Sec.
Dundee.—August 26th, 27th, and 28th. Mr. R. McKelvie, 51, Reform Street, Sec.

TRADE CATALOGUES RECEIVED.

Charles Green (late Gardener to W. Wilson Saunders, Esq.), Botanical Nursery, Holmesdale Road, Reigate.—*List of Greenhouse, Herbaceous, and Alpine Plants.*

William Paul, F.R.H.S., Waltham Cross, London, N.—*List of Roses (New), Geraniums, Phloxes, &c.*

James Backhouse & Sons, York.—*Catalogue of Alpine Plants and Hardy Perennials.*

James Carter & Co, High Holborn, London. — *Illustrated Catalogue of Prize Farm Seeds and Potatoes.*

TO CORRESPONDENTS.

*** **All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.**

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

*** We have many valuable communications which we are obliged to omit until next week.

Books (*J. Kelly*).—Keane's "Indoor Gardening" may suit you. You can have it free by post if you enclose twenty postage stamps with your address.

Constructing Cucumber Pit (*M. A. H. B. L.*).—We should have the house sunk about 2 feet, and the walls about the same above ground. A span-roofed house would be best with a bed on both sides of the house and a walk up the middle. If you require one bed only, a half-span would be most suitable, having a walk along the back. The front wall we should have of the height named, and the back wall the height required to meet the back part of the roof. Not knowing the width we cannot give the height of the back wall. The roof only we should have glass, with one or both ends level with the front brickwork. Ventilating should be provided at the upper part of the roof. You will need two pipes for bottom heat to each bed, and four for top heat. The surface of the bed should be about 2 feet from the glass, and the trellis a foot from it. Your boiler will not heat more than 200 feet of 4-inch piping. We should have one a size larger, as it is better to have one above rather than under its work. Such a house we believe would not be portable, and it is well to be certain on that point before you erect.

Seakale after Cutting (*C., Killarney*).—The Seakale not having been forced, should have the blanching material removed when the weather is mild, yet before the growth is advanced. In cutting, the cut should be just at the base of whence the new growth proceeds. Just below this will proceed shoots which will give the crowns for next year's crop By keeping the crowns covered you will certainly secure a second crop of weakly stalks, but the growth afterwards made will be poor, and the produce resulting another year very indifferent.

Purple Broccoli (*Idem*).—These are not so desirable as the white, but are by many esteemed. The Purple Cape is ready for use in autumn. Dwarf Danish Purple and Sprouting come in during March and April, and Howden's Dwarf Purple in May and June. The seeds should be sown at the close of April or early in May.

Heating Houses (*J. P. of York*).—We do not approve of the 2-inch flow-and-return pipe from and to the boiler. We know the water will enter the boiler in a similar ratio as that passing out of it, but we maintain the water has not so free an egress and ingress to the boiler when 2-inch pipes are employed instead of 4-inch. The 2-inch pipes we should alter to 4-inch, and take them the entire length of the cold pit, across its end through into the stove, and through the stove in the way you show, but with the water flowing the reverse way to what is represented in your sketch. This will give you four rows of active piping, whereas by your plan half of the piping would be of no use only when you have heat in the vinery, and that will be in summer, when you want least in the stove. The advantage of the change will be equally great in the winter, as the vinery will then need to be cold. The flow pipe after entering the stove as far as you show may have a branch to the right and left, the right for stove, and left for cool vinery, upon which should be a valve, and the like arrangement of the return pipes of these houses will give you all you require. We should have the pipes in the vinery as shown in stove and greenhouse—*i. e.*, 4 inches from the edge of border instead of 3 inches, and they must be raised so as to be on the same level as those in the stove, or the circulation of the water will be sluggish, if not altogether arrested. Three-inch pipes will be ample for the vinery, but all the others ought to be 4-inch.

Adiantum farleyense not Thriving (*R. W. B.*).—It is a stove Fern, and to having been kept in a greenhouse we should attribute its present sickly appearance. Remove to a stove, affording a moist atmosphere, and shade from bright sun. Repot when it is growing freely. The bad appearance may, however, have been caused by fumigating with tobacco, of which it is more susceptible of injury by than any plant we know. If in a pot, as we presume it is, remove from the house whenever the house is fumigated. It does tolerably well in a warm greenhouse, being kept in the moistest part and shaded, but to have fine it requires a stove.

Orchard-house and Greenhouse Arrangements (*H. W.*).—The height of the back wall for a house the width you name, with a height in front 7 feet ought to be 15 feet, and you will need to provide efficient top and front ventilation. This is a very important point in greenhouse and orchard-house construction. You can have pipes put in on the opposite side of the boiler—*i. e.*, branching from the flow of the greenhouse for the orchard house, and taking it along that house, returning by the return pipe from the greenhouse. The pipes, as you have an open cistern, must all be on the same level. An air pipe on the highest part of the orchard-house piping will allow of air passing out of the pipes. The pipes in both houses when cold need not be more than three-quarters filled with water in the flow pipes, so as to allow for expansion, but taking care to have them so full as to insure the circulation of the water. Two pipes 4 inches in diameter along the front and across one or both ends of each house will be sufficient to exclude frost in severe weather, and by having valves on the orchard-house pipes you will be enabled to work them separately or together. We consider it a mistake to have Vines in the orchard house, especially on the roof, for though you may have good Grapes it will be had at the expense of the trees beneath. We should not have any on the roof, but you may have them as pot plants or planted out, but trained upright. You can have Vines in the greenhouse trained to wires 15 inches from the glass, and at 4 feet apart you will have room for five Vines. You will have space in your house for two rows of trees at 5 feet apart, which will be quite close enough. This will give you sixteen trees, and having the trees not nearer the back wall than 5 feet, and the pathway about 18 inches from it, and 2 feet 6 inches wide, enough light will be admitted to make the back wall available for Peach trees. We should have two—viz., Royal George and Grosse Mignonne, with an Elruge Nectarine in the centre. This plan will leave the front space available for other fruit trees.

Hedge for Hollow (*Vallambrosa*).—It appears you intend to make a ditch or trench, and you want to know what to plant in the ditch, and not upon the bank or side of the ditch. If the former we can only recommend Birch, which will grow well and does not make a bad fence, but is not good against cattle, though answering well as a screen. If upon the bank we advise Thorn or Quick, which is unquestionably the best of hedge plants. We think you mean in the trench, and therefore advise Birch, which kept well cut will meet your requirements. Birch, Alder, and Willow are the only trees suitable for such a position.

Wires for Pear Espaliers (*J. E.*).—Six wires 10 inches apart, the first a foot from the ground, will be proper for your trees; but we should have had the trees vertical trained and planted 5 feet apart, each tree with six branches, and the trellis 6 feet high, and the wires a foot apart. Horizontally-trained Pears on the Quince have the lower branches very often weak.

Fig on Greenhouse Wall (*Idem*).—With Vines on the roof at 3 feet apart you will have little chance of fruit from a Fig tree against the back wall. We have, however, known them do fairly, the Brown Turkey being most suitable. The wall, if you have the tree, which we do not advise, would be best wired.

Draining Fern Case (*Cryptogamia*).—At the bottom there should be a clear space of an inch; at this height have a second bottom of perforated zinc. A small pipe at one end coming outside the case from the open space will enable you to run off at will any surplus water, the end of the pipe being fitted with a thumb screw. Over the perforated zinc you will still need an inch of drainage; the best is charcoal broken up in pieces from the size of a hazel to a walnut, and passing it through an eighth-of-an-inch sieve to free it of the dust, and over this a thin layer of cocoa-nut fibre, or the rougher parts of the compost. The fine charcoal siftings will do to mix with the compost at the rate of one-sixth charcoal to the other parts of the soil. The Ferns have not hitherto grown because they are waterlogged.

Ribbon Border (*A. F. N.*).—The arrangement would look well. The best blue Ageratum is Chater's Imperial Dwarf. It comes readily from seed, but we prefer raising our stock from cuttings taken from plants selected for that purpose last season. Little Trot is by far the best and most compact white-edged Geranium, but as it is only just now being sent out you had better take May Queen or Miss Kingsbury for the present season. They are both excellent varieties.

Auriculas in House Facing North (*A. C. S.*).—The Auriculas might do in the situation proposed during the summer and autumn months, but I question their doing so during winter and spring. I never saw the varieties named, and so can say nothing of their merits.—D., *Deal.*

Hardy Rhododendrons (*C. T. S.*).—The following twelve are good:—Atrosanguineum, dark crimson; Titian, reddish pink; Queen, white; Stella,

pale rose; Purity, white, yellow-eyed; Briareus, rose; Chancellor, lilac; Formosum, white; Oberon, purple; The Gael, pink and yellow; Incomparable red; Lord Clyde, crimson; and Columbus, flesh-coloured.

Tracing Paper (*Anne P.*).—You may make and unmake the tracing paper you wish to employ for copying portraits of flowers, and then placing the copies in your album by thus preparing the paper. One measure of castor oil dissolved in two or three measures of spirits of wine renders paper transparent, and when the spirit has evaporated the paper soon becomes fit for drawing upon. If the paper is subsequently placed in spirits the oil is dissolved out, and the paper is restored to its original condition.

Passion Flowers (*C. J.*).—We do not know where the flowers can be now obtained.

Panicum (*A. K.*).—We do not know a species called Panicum capillaceum. There is P. capillare. It is a hardy annual, native of America. Its botanical characters are, panicles capillary, erect, spreading; peduncle straight; glumes acuminate, smooth; sheaths very hairy.

Seedling Briar Stocks (*M. P.*).—They are raised from seeds of the common hedge Briar. The plants are two years before they are large enough for budding. Leave the hips on the Briars until February, and then sow them. We think that stocks from cuttings are as good as those from seed. The lower buds of the cuttings should be rubbed off.

Seedling Primula (*A. A.*).—We do not discern any difference from a variety of the same colour to be obtained of florists.

Verbena Melindres (*E. Collins*).—Any of the florists who advertise in our columns could supply you.

Pine Apple Leaves Shrivelled (*R. S.*).—The leaf you sent is spotted from water having lodged upon it, and the sun falling powerfully upon the leaf whilst in this state has so heated the water as to destroy the tissues of the leaf. Such mishaps usually follow a period of dull weather, a few hours' powerful sun being sufficient to cause the mischief. The only remedy is more careful and earlier air-giving; better have them dry under bright sun, moisture being kept up by other means than syringing overhead.

Passifloras in Greenhouse (*H. T.*).—The Passifloras you name are very free growers and equally free flowering, and would cover a large extent of roof in a year or two. They may, however, be kept within reasonable bounds by frequent regulation of the growths. They would be best planted out in the border as you show at B. They are likely to suffer from the heat of the hot-water pipes unless they are close to the stems of the plants; if 6 inches distant from the pipes the stems of the plants will be quite safe.

Names of Plants (*J. Luck*).—Adiantum capillus-Veneris and Adiantum Farleyense.

POULTRY, BEE, AND PIGEON CHRONICLE.

BROODY HENS.

We fear good chickens at the early chicken shows will be very scarce this season. We never remember such disastrous accounts from our friends of their early chickens as we have had this year. From all we receive these reports, and these from all over England. One gentleman of wide fame writes from Lancashire, "We have had a terrible winter and lost many valuable birds, and have not a chicken." Another writes from Devonshire, "We have never had such a winter, we are all behind," and from Kent, Surrey, Suffolk, Shropshire, and other counties come the same bad tidings. Some attribute the failures to the severity of the weather, others to the want of eggs, a third party to its being such a bad hatching season, but the large majority assign as the cause being unable to procure broody hens. There are exceptions to every rule, and so here, for we saw the other day two honny lots of 1875 Malays, and we hear of a few Dorkings at Early Wood and Micheldever, and of Brahmas at Creeting, and Black Cochins at Baschurch, but still these are the exceptions, and the rule is a total failure in early chickens.

There is plenty of time yet for those who, like the worthy Stoke Park manager, do not go in for early chicken showing, but in the yards of those fanciers who do usually support such exhibitions we hear of a perfect absence of 1875 chickens, and this, as we said before, principally from the want of broody hens. We know of one gentleman who has offered in his neighbourhood 10s. each for sitting hens and offered in vain. Really an exhibitor needs to keep a stock of an hundred or so birds for sitting purposes, only to ensure broody hens in the early year.

We conclude it is in consequence of this great demand for sitting hens, which increases yearly, that the "broody hen trade" as we will term it, seems to thrive so well in places: we repeatedly see advertised "broody hen, china egg, nest and all for 5*s*." This sounds charming, and we know of two parties, unknown to each other, though well known to us, who answered such an advertisement, and enclosed 5*s*. and ordered the sitting beauties to be sent forthwith. The baskets came with the china eggs and the nests, and the hens are there, but they are not broody! And they look as if they had not laid an egg for a month, or were likely to do so for two or three more to come. This happened in both cases. One of the purchasers in a fit of indignant anger wrote to the vendor and complained, saying the hen would not sit, and had never wanted to sit! To him came back the cool reply, "Sometimes I find they do fail, so I return you 1*s*. in stamps." And, N.B. the man had got 4*s*. for a hen who had doubtless had many a brood, but would not have another for many a long day to come, and which would be very dear to buy at 1*s*. 6*d*.

We mention this to show that all those tempting offers in cheap advertisements are not to be accepted. We do not say but that many of the hens advertised do want to sit when sent away, and do sit when they arrive, and sit well. We know of one gentleman who has bought such and done well with them, but we cannot think the plan a satisfactory one, and it makes us long for an incubator warranted to hatch. We wonder if there ever will be such. When we say warranted, we mean of course, provided all ordinary trouble and care are taken. Mrs. Cheshire has shown us how to take care of the chickens when we have them by her most ingenious and simple apparatus. Now we want someone to show us how to hatch them. We are fully aware that during this season new incubators on simpler principles have come out, but we have not heard of anyone who has been really successful with them. When we say successful we mean for six or seven eggs out of every dozen to hatch. We feel it would be a real boon, a real benefit to the fancy, for some incubator to be introduced which will bring about with ordinary trouble and care the desired end. We have tried incubators, and our friends have tried them, but always without real success. We have had them or seen them in use from many makers, and burning everything conceivable from paraffin oil down to night lights, but always without success, and yet those who have tried them are really practical people, who have spent much time and money over them. Talking of incubators, however, as an example of how very foolish some people must be, we heard of one lady, and know it to be a true story, who had just been taken with the fever, and hearing of an incubator, or as she called it a hatching machine, sent for one, and on its arrival placed eggs in it with the greatest possible zest, and expected thereby to do away with the tedious period of three weeks' incubation, and that the eggs would hatch out at once by machinery! This may seem incredible, but it is true. It is a parallel case to the gentleman who bought a Carrier Pigeon, tied a good thick letter to its wing, and having whispered to it to fly to his wife in London (he was at Ramsgate) let it fly!—W.

HOUDANS AS LAYERS.

My experience is something similar to "D., *Deal's*."

On April 5th, 1873, I hatched a brood of Houdans, out of these I had three pullets. I had the first egg from these on the 13th of December, and I had eggs constantly from these three pullets up to September 27th, 1874. The three pullets averaged in this time about 120 eggs each. They then began to moult. Last spring I bred from these three pullets and a cockerel (not related), two broods of chickens in April. Out of these I had about eleven pullets. I had the first egg from these on November 6th. From November 6th to December 27th I had thirty-six eggs, and then they left off altogether until January 25th, 1875. Since then up to this date (March 5th), I have had seventeen eggs.

The two-year-old hens that I have spoken of as averaging last year 120 eggs each, have never laid since they left off to moult. They have an enclosed grass run, and are fed on good barley and a feed of scraps and pollard every now and then.

I may say that I have now only four of the pullets and two of the two-year-old hens, having parted with the rest on account of their bad behaviour.

I have a pen of Black Hamburghs which I bought about Christmas time (a cockerel and two pullets). These began to lay on February 7th, and since then I have had seventeen eggs from them. I also know a person who has some Black Spanish and also some common hens in full lay, despite the severity of the weather.—Edward Smith, *Maldon*.

THE EXHIBITION DORKING.—No. 12.

BY T. C. BURNELL.

The Silver-Grey Dorking is really a beautiful variety, and combines the useful points of the Dark Dorking with most attractive plumage. It is to be regretted that this breed is so little patronised, as I am sure no other purely fancy breed can compete with it where fowls have to find their own food; nor do they ever look to greater advantage than when working hard for their living in a hedgerow or homestead.

The shape of the *Silver-Grey Dorking cock* differs in no respect from that of the Dark Dorking: the difference is solely in the colour; and as this is a fancy breed, colour is of greater importance than in the Dark variety. The comb of the Dark Dorking may be either double or single, but the comb of the Silver-Grey must be single. This is well recognised, though I have never seen it mentioned. The plumage of the Silver-Grey cock must be solely of black and white feathers, any red or parti-coloured feathers being a disqualification. The neck hackle should be a clear white, but a slight pencilling of black down the centre of each feather is allowed, provided it does not produce a dark

appearance. The back, shoulders, saddle, and saddle hackles should also be of a pure white, while the breast, tail, and thighs should be black, any white in these parts being a disqualification, except on the thighs, where a little grizzling in an old bird will pass. The black wingbow should be cleanly cut, and this makes a pleasing contrast to the white of the remainder of the wing.

The plumage of the *Silver-Grey hen* is exceedingly pretty, the whole of the body feather and wings being of a clear silver-grey colour, while the breast is a rich robin red. As in the Dark Dorking, the shaft of each feather should be distinctly white, only in the Silver-Grey variety this should not extend to the wings and shoulders, or it rather spoils the general appearance. The neck hackle should be white, with a narrow and distinct black stripe down each feather.

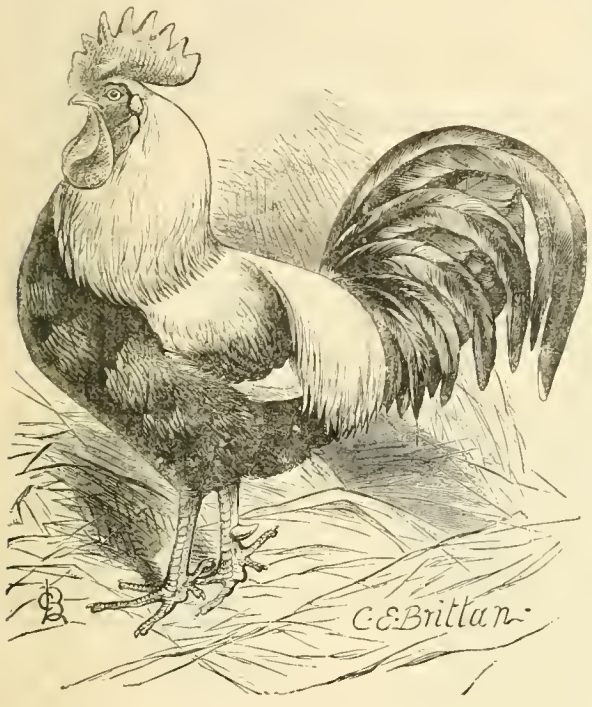


Fig. 53.—Silver-Grey Dorking Cock.

Although good Silver-Grey hens are by no means easy to breed, the cocks are far more difficult to obtain perfect; and I often think when I see judges withholding prizes in the Silver-Grey classes while they give prizes to Mealy Cochins and White-throated Brahmas, that they do not make due allowance for the very great difficulties which Silver-Grey Dorking breeders have to contend against.

By far the worst point in a Silver-Grey cock is a yellow hackle or saddle; it spoils the whole beauty of the breed. The smallest speck of white in the breast of the cock or in the tail is considered a disqualification, though I would far rather see this than a yellow hackle. The back and shoulders must be free from red or chestnut feathers: this is positive. The earlobes should be red.

The defect most difficult to avoid in breeding the Silver-Grey hens is a rustiness or dullness of the plumage, especially on the wings. Birds showing this defect should be avoided either for breeding or the show pen, as cocks bred from them would be sure to breed rusty-winged pullets. I should not discard a bird altogether if large and only slightly ruddy on the wing, as this will wear away a little with age, but a white breast or tail in a cock will infallibly become worse with the moult.

The Silver-Grey Dorking seldom or never attains the size of its darker brother; but cocks of 10 lbs. in any breed are quite large enough for all useful purposes, and I should be glad to see the judges look more to feather, shape, comb, and feet than to mere size. "Sooty feet" are not uncommon, and they must be carefully avoided. I have seen it remarked that the "sooty" feet now so common in Dark Dorkings have been caused by the overbreeding for dark feather; but if so, how is it that dark feet are quite as common with the Silver-Greys?

To breed Silver Greys perfect birds must be obtained, though they be small, and the importance of obtaining cocks of a good strain cannot be over-rated. Birds of different strains sometimes produce very badly-coloured chickens if the two strains do not amalgamate or "nick," as it is called; and in commencing a strain it will be far better to procure the cockerels and pullets from the same yard, and afterwards to buy hens of the correct colour to cross with, as by this means size may be kept up with less danger of the whole yard being spoilt.

To obtain early chickens it will be necessary to breed from cockerels, as I have found from painful experience that two-year-old cocks are not to be trusted till the warm weather appears.

The Red speckled Dorking is now almost obsolete, having given way to the more fashionable Dark and Silver-Grey varieties. Specimens may still be seen in the farmyards of Surrey and Sussex, but of no great excellence.

The principal peculiarity is found in the hens, which are of a brown or chocolate colour, spangled all over with distinct white spots as large as a large pea, giving them the appearance of having been out in a fall of snow. This colour is I think more curious than attractive. Cocks to match such hens should have a good deal of red and chestnut on the back and shoulders, their breasts should be spotted with white or red, and white in the tail is not objectionable. I believe they are a hardy breed and very readily fatten.

HULL SHOW OF PIGEONS, &c.

The first Show, which is proposed to be annual, was held in the Albert Hall in Hull on the 11th and 12th inst. Financially it was a rare success, and the visitors were very numerous. The room was small, but the most was made of it; yet there was not much space for visitors. The animals were well attended to, and fed with correct food except the cats, which had each a portion of raw bullock's lights, to which we would draw the attention of committees, this being the most indigestible of food, and smells disgustingly, and is generally voided; while if well boiled it is an excellent diet for them while in confinement. This can be easily excused, as the management of the cat in the show pen is scarcely understood as yet.

Pigeons were first on the list, *Pouters* taking the lead. These classes, though containing some good birds, were not good as classes. In Blue or Black, Mr. Nottage won first with his grand Blue cock; the second, a Blue hen, being also very good in style and limb; third a large Blue cock. In any other colour the first was a large bird, capital in style and shape, but very bad in colour (Red); second was a stylish White cock of last year; but we thought that gentleman ought to have taken third with his White hen in place of the Red cock to which the award was made, the latter bird being very shaggy in appearance, and altogether out of condition, although said to show well in a large pen. In *Carrier* cocks the first was a Black, good in style and beak wattle, but bad in eye wattle; second a good all-round bird, but not so heavy; third Dun, but rather broad-skulled; and extra third Black. In hens Mr. Yardley won with a grand Black; the second going to a Black almost devoid of beak wattle, but good in eye; the third much better, but rather spouty. In *Barbs* (Black) we did not agree with the awards, the winners being very spouty in eye and in bad order, except the second-prize bird, which we should have placed first. In the next class equal firsts were awarded, but we had no hesitation in marking the best of the two (Baker) Yellow; second should have been Mr. Spencer's Dun. Mr. Yardley won third with a capital Yellow hen. In *Owls* the English were passed entirely unnoticed, the preference being given to the foreign variety. First was a very small White; second a large Blue, with a perfect head; third White, and good extra white as well; but one of the best, a neat Black, shown by Mr. Shillitoe, was passed unnoticed. This bird would not have been wrongly placed if the first award had been made to it. *Turbits* were a fair class, the first going to an excellent Silver; second to a White one, superb in all Turbit properties except colour, and we must confess we never saw a White one admitted in good competition before as the leading property seems to be altogether lost. Third was a Silver, but not as good as some others in the class, particularly a Red shown by Mr. G. S. Stephenson. *Jacobins* not a good class, first a capital Red; second White, but coarse; third Red, and good all round. In *Tumblers* all were noticed, and were a capital class, first was a Kite, perhaps the best in existence; second Mr. Yardley's Almond cock; and third a good Agate, all well placed. *Fantails* were good, the first about perfection; second a fair bird; third Blue, good in carriage, but tail too narrow at bottom. The awards in *Antwerps* were not in accordance with our experience, the first was a Blue medium-faced cock, with a sandy eye, a bad fault; second a good Short-face, except that his colour was two mealy and bars bad; the third, a Blue cock, had a small frill. In our opinion the first ought to have gone to Mr. White's Silver Dun Short-faced; second to Mr. Stanley's Red Chequer ditto; and third to Mr. Yardley's Silver Dun. *Dragoons* were almost all of the London Fancy, three of the four awards going to Yellows, and one to a Blue, all well placed from the London stand-point. This was a large class. In the Variety class the first was a perfect Archangel; second an almost equally good Grey Frillback; extra

second a grand Trumpeter; and third to a good Blondinette. This class was thoroughly well judged. Two Selling classes containing upwards of eighty entries wound up this section. There were five pieces of plate awarded as point prizes, and the whole were won by Mr. Baker.

Eleven classes, with four pieces of plate, brought together a splendid entry of RABBITS; but unfortunately the awards were not made by the advertised Judges. In the first case we know not why, but in Mr. Allison's case through serious indisposition. In *Lop-eared* Bucks Mr. Boden was rightly placed first with his Black, which was second at Northampton, and which has mightily improved since that time; length 22¼. Second was a good Fawn-and-white, 22¼; third a thoroughly crooked-legged Rabbit, Tortoiseshell; and extra third a Fawn, 22 inches measurement. In Does Mr. Irving won both first and third with Black-and-whites, the first taking the cup also, this being a little short of marking, but a really grand Rabbit, ear 23 inches; the third being 22½ and better in marking, we thought should have been placed before the second, which, though a grand Rabbit, wants condition. Mr. Cranch showed a Black-and-white, which we thought should have been noticed. *Angoras* were a good class, and Mr. Swetman beaten with an excellent Rabbit quite as large and much finer in fur; the third going to a small but well-woolled animal. *Silver-Greys* were a bad class, although the prize Rabbits were good; but it is quite certain that Mr. Firth's buck, which has attained fine condition, should have been first, and Mr. King's second. Mr. Hallas won three thirds, the silvering of the bodies being good, but the heads a little too dark. Mr. Hudson's buck (not for competition) spoiled the lot. *Belgian Hares* were a good class, and the awards well made. Any other variety followed with a very pretty so-called Siberian (which is neither more nor less than a cross between the Himalayan and Angora) first, and Silver Creama second and third. *Dutch* were next, with Black-and-white (rather large) first and cup; a small neat Blue second; third Blue; and extra third Black. *Himalayans* were a good class, and the winners pretty well chosen, the Secretary purchasing and awarding an extra himself to the first, although we confess a preference for the second-prize Rabbit; the third also very good. There were two Selling classes, and some good Rabbits shown, the special going to a capital Fawn-and-white buck. In the next class the first was a Silver-Grey; but this was nothing nearly so good as one shown by Mr. Hincks, nor that by Mr. King, and should not have been in the list; second was a nice Angora; and third Belgian Hare.

In CATS there were no entries for Tortoiseshell. In Any other variety the Tabby Lion was placed first, but was evidently ill at ease in his den; second and third were also Grey Tabbies, but in marking, which we understood to be the point expressed in the schedule, the third was far ahead, although the first was beat in other points.

POUTERS.—*Blue or Black.—Cock or Hen*—1 and *c*, W. Nottage, Northampton. 2, J. Baker, Kew Bridge. 3, H. Yardley, Birmingham. *vhc*, J. Baker; H. Severs, Middlesborough. *hc*, J. Baker; P. R. Spencer, Hereford; W. Nottage; J. Richmond, Accrington; R. H. Blacklock, Sunderland.

POUTERS.—*Any other colour.—Cock or Hen.*—1 and *c*, J. Baker. 2, J. E. Spence, Broughty Ferry. 3, T. Wood, York. *vhc*, A. Spencer, Driffield. *hc*, W. Nottage (2); G. Robinson, Sunderland; L. & W. Watkin, Northampton.

CARRIERS.—*Cock.*—1, 3, and *vhc*, J. Baker. 2, H. Yardley. Extra 3, H. Yardley; P. R. Spencer. *hc*, B. Hudson, Driffield; P. R. Spencer; R. H. Blacklock. *c*, F. Hodgson, Driffield; W. Blacker, Hull. *Hen.*—1 and *vhc*, H. Yardley. 2 and 3, P. R. Spencer. *c*, F. Hodgson; J. Baker.

BARBS.—*Black.—Cock or Hen.*—1, J. Stanley, Blackburn. 2 and 3, H. Yardley. *vhc*, J. C. Adams. *hc*, W. Brydone. *c*, J. Baker; H. Crosby; J. C. Adams; G. W. Dutton; J. Holden.

BARBS.—*Any other colour.—Cock or Hen.*—Equal 1, J. Baker; J. E. Spence. 3, H. Yardley. 2, J. Stanley. *hc*, J. Baker. *c*, J. C. Boothby.

OWLS.—*Cock or Hen.*—1 and Extra 3, G. Anderson, West Hartlepool. 2, C. N. Lythe, Cottingham, Hull. 3, J. Baker. *vhc*, J. Baker (2); J. Stanley. *hc*, J. C. Adams; R. Shillitoe. *c*, J. Baker.

TUMBLERS.—*Cock or Hen.*—1, 2, and 3, J. Baker. *vhc*, W. Brydone; T. S. Stephenson (2); J. Baker; E. A. Thornton. *hc*, C. N. Lythe; C. W. Washbourne; E. Heath. *c*, W. R. Rootes.

JACOBINS.—1 and 2, J. Baker. 3, T. Holt, Bradford. *vhc*, W. Brydone; G. E. North; T. Holt. *hc*, J. Baker (2); J. Banks. *c*, W. Nottage.

TUMBLERS.—*Cock or Hen.*—1, J. Baker. 2 and 3, H. Yardley. *vhc*, J. Baker (2); R. Minnitt. *hc*, H. Yardley; J. Stanley; J. Baker. *c*, W. Brydone; G. Holloway.

FANTAILS.—*Cock or Hen.*—1, A. Smith, Broughty Ferry. 2, S. Lawson, Preston. Extra 2, J. Warhurst, Stalybridge. 3, J. Walker, Newark. *vhc*, J. Baker; J. E. Spence; T. & W. Peirson; J. Warhurst. *hc*, J. C. Boothby; J. F. Loversidge; J. Baker. *c*, J. C. Boothby; J. F. Loversidge; J. Baker.

ANTWERPS.—*Cock or Hen.*—1, G. Blakey, Driffield. 2, R. White, Manchester. 3, F. Eastwood, Littleborough. *vhc*, H. Yardley; J. C. Boothby; H. Yardley; R. White. *hc*, H. Yardley; C. Jackson; J. Cowley; J. Stanley.

DRAGOONS.—*Cock or Hen.*—1, J. Baker. Extra 1, H. Yardley. 2. Extra 2, and 3, R. Woods. *vhc*, J. Baker; J. Richmond. *hc*, A. McKenzie; R. Woods (2); J. C. Boothby. *c*, J. Baker; J. Stuttard; H. Crosby; G. Hart; D. Maynard; R. Woods.

ANY OTHER VARIETY.—*Cock or Hen.*—1 and Extra 2, H. W. Webb, Lower Sydenham (Archangel and Frillback). 2, J. Baker. 3, E. Heath, Blackburn. Extra 3, H. Yardley. *vhc*, H. Yardley; G. F. & W. R. Umpleby (Red Priest). *hc*, H. W. Webb (Magpie); J. Richmond. *c*, E. W. & S. W. Anderson (Archangel); J. Baker; H. W. Webb (Pigmy Pouter); J. Banks (Magpie).

SELLING CLASS.—*Cock or Hen.—Price not to exceed 25s.*—1, P. R. Spencer. 2, J. W. Harling, Burnley (Barb). 3, J. Baker. *vhc*, W. A. P. Montgomery (Trumpeter); W. Brydone (Owl); J. Nottage; J. C. Adams; H. T. Hincks. *hc*, H. Yardley; J. Baker (2); J. Nottage; J. Banks (Red Swallow); W. Dugdale; E. A. Thornton (Almond). *c*, T. & W. Peirson (Tumbler); E. A. Thornton (Red Jacobin).

SELLING CLASS.—*Price not to exceed 50s per Pair.*—1, L. Allen, London Road, London, S.E. (Black Beards). 2, H. Yardley. 3, W. A. P. Montgomery, Belfast (Yellow Owls). *vhc*, L. Allen (Yellow Owls); J. Baker; G. W. Dutton (Yellow Barbs); G. Stephenson (Tumblers). *hc*, H. Crosby (White Dragoons); W. Brydone (Tumblers); G. Deatner (Tumblers); J. Nottage (2); G. Stephenson (Magpie, Fantails, and Nuns); R. Stabler; R. White. *c*, J. Walker; G. E. North; J. Baker; H. T. Hincks; J. W. Harling (Pigmy Pouters).

RABBITS.

LOP-EARED.—*Buck.*—1, Dr. Bodeo, West Hartlepool. 2, Mrs. H. Pickworth, Spalding. 3, T. Schofield, Manchester. Extra 3, J. Ashley, Hull. *hc*, T. Schofield, jun. *c*, J. Falldiog. *Doe.*—Cup, 1, 3, and *hc*, J. Irving. 2, Dr. Boden. *c*, C. King.

LOP-EARED.—Special 1, T. Myton, York. 2, T. Schofield, jun. 3, J. Wharton, York. *hc*, J. Hallas; A. Canty; J. Wharton. *c*, J. Graham.

ANGORA.—1, A. Atkinson, Huddersfield. 2 and *hc*, H. Swetnam, York. 3 and *c*, J. Hallas, Huddersfield. Extra 3, W. Russell.

SILVER-GREY.—1, C. King, Henry Street, London. 2, J. Firth, Leeds. 3, J. Hallas. Extra 3, J. Hallas (2); J. H. Brand, Bartoo-on-Humber. *hc*, F. J. Allpress; A. Canty; T. Schofield. *c*, B. Greaves; R. A. Bossier.

BELGIAN HARE.—1, B. Greaves, Cleethorpes. 2, J. E. Pilgrim, Hinckley. 3, J. Hallas. Extra 3, G. C. Livett, Soham. *hc*, T. H. Dows. *c*, J. Hallas; G. C. Livett.

ANY OTHER VARIETY.—1, B. Greaves (Siberian). 2 and 3, J. Hallas. *c*, J. Boyle (Silver Cream).

DUTCH.—Cup and 1, B. Greaves. 2, W. Donkin, Driffield. 3, Mrs. H. Pickworth. Extra 3, A. Lund, York. *c*, T. Schofield, jun.

HIMALAYAN.—1, G. C. Livett. 2, A. Atkinson. 3, J. D. Eames, Great Driffield. Extra 3, T. Garner, Northampton. *hc*, C. G. Mason, Rochdale. *c*, J. Pickworth.

ANY OTHER VARIETY EXCEPT LOPS.—1, A. Whitehouse, Northampton. 2, H. T. Hincks, Leicester. 3, G. C. Livett (Belgian Hare).

LOCAL CLASS.—1 and 2, J. Ashley. 3, W. Russell, Hull. *hc*, A. Wokes.

CATS.

ANY VARIETY EXCEPT TORTOISESHELL.—1, G. Baxter, Bath Place, London. 2, J. Halleoby. 3, Miss Shepherd, Hull. Extra 3, J. Platt, Hull. *hc*, H. Witty. *c*, W. Lumb.

Mr. Dobson judged the Lops, and Mr. Fletcher the other varieties.

PRESENTATION.—On the 11th instant the members of the Newcastle-upon-Tyne Poultry, Pigeon, and Canary Show and a few friends presented Mr. H. O. Blenkinsop with a testimonial, consisting of a beautiful marble timepiece, with the following inscription:—"Presented to Henry O. Blenkinsop by the members of the Newcastle Poultry, Pigeon, and Canary Show for his past services as honorary secretary."

OWL PIGEONS.

"WILTSHIRE RECTOR" in your Journal of the 25th makes out as good a case as is possible for his favourites, but still to me it is not convincing. The main point is still untouched, What is an English Owl? Is it a fancy bird with a standard of its own, or is it a coarse form of the genuine high-bred bird?

As there is no standard we must conclude that it is the latter—that is, a bird bred halfway to excellence, and then its admirers for some reason I cannot imagine come to a stand and say this is our favourite. I will not dispute that they are not beautiful birds (I cannot conceive of Pigeons being otherwise), but as there are degrees of beauty I contend that they would be much more beautiful still by endeavouring to rival the foreign birds.

"WILTSHIRE RECTOR" says they were beautiful birds a hundred years ago. I have no doubt of it, and that they were also finer in Owl points than the English birds of the present day. How the foreign bird might be considered as the degenerate form I cannot think. If so, then one might think of the English Carrier as a degenerate form of the old Horseman.

As to colour, if we look at the gentle expression of the fine white foreign birds and their equally gentle retiring ways, I think no colour so suitable as white, as it gives the idea of purity and innocence so fully. The blue birds lose half their charm by their colour. There is wildness in their appearance from the dark beak that tells greatly against them.

The powder blue the old writers do not say a word about; but admitting that they had mentioned them, no good fancier would sacrifice other far more valuable properties for it.

Next to white, I should say that a genuine yellow would be the most beautiful if good in other respects. Eaton says in one of his quaint notes that "the Owl does not derive its name from colour." He also says it ought to "rank third among the Toy birds." Not in the least too high for its merits.

Before leaving colour I may state that the so-called powder-blue colour is of very recent introduction in Owls. I have a confused recollection of an article that appeared in your Journal I think, less than twenty years ago, describing how it was first produced. The late Mr. M. Wicking of London was one of the parties concerned, but I cannot recollect particulars. However, I am convinced that nothing can equal the fine white Owls. They look like creatures not of this earth and yet are on it.

The case of the flying Tumbler and the Almond I do not think analogous to that of the Foreign and English Owls. The Tumbler, if we want tumbling birds, must be kept in its original form, and this is the great point in those birds. The Almond, on the other hand, is not meant for flying or tumbling, it is a mere fancy to show the breeder's power over form and colour, and this power is here made strikingly manifest, it is quite out of the way; whereas the Foreign and English Owl is only a halfway difference. Instead of the common Tumbler and Almond, I would say that the English and foreign Trumpeters make a case quite analogous to the Owls, though no one

has yet openly espoused the cause of the English bird; it is quite as good in its way as the English Owl.

"Wiltshire Rector" says the English bird can make good use of its wings, and so can the foreign when flown, which I have done. I am, therefore, still of the same opinion, that to give prizes for English Owls is only offering a premium for mediocrity. In a general way I am not for "furrin" things or ways, but here we are beaten by those whom in our national conceit we look upon as barbarians, or something not far off that etate. They have given us a lesson in the fine arts (for such I hold high-class fancy Pigeon breeding to be), that we ought to profit by.—Bubo.

THE PRIZE CAGES AT THE CRYSTAL PALACE BIRD SHOW.

FIRST-PRIZE CAGE.

The Judges were unanimous in their selection of the cage 1465, exhibited by Mr. Thomas Alwin of Deptford. It speedily met with their entire approval, owing to its adaptability for the show room not only during the daytime but during gaslight, the wire construction of it, especially at the roof, allowing sufficient light to enter the cage and the bird not being shaded, as in the ordinary box cages now generally used. Being of a compact shape and handy size, similar to the cages in use, it may easily be packed. One very ingenious advantage is in the construction of the receptacles for seed and water, which are made to fit in the woodwork on each side of the cage, with mouthpieces or cups the size of the first joint of the thumb to enter each side for the bird to supply itself with seed and water. This is shown by the engraving *a* (fig. 59). The one for seed has a square hole at the top part, by which the receptacle is supplied with seed; and it is calculated to hold sufficient seed for one week for a single bird. The receptacle for water has no hole in the upper part, it being necessary that it should be kept air-tight. When the latter has to be supplied with water it has to be detached and filled at the mouth where the bird drinks from. Altogether it is well adapted to meet all requirements. It is 12½ inches in length, 12¼ inches in height, and 5½ inches in width. The cost is stated to be about 2*s.* 6*d.*; but even supposing it to be a trifle more, it would well answer the purpose required. This cage was awarded the silver medal, and is well suited for most small birds.

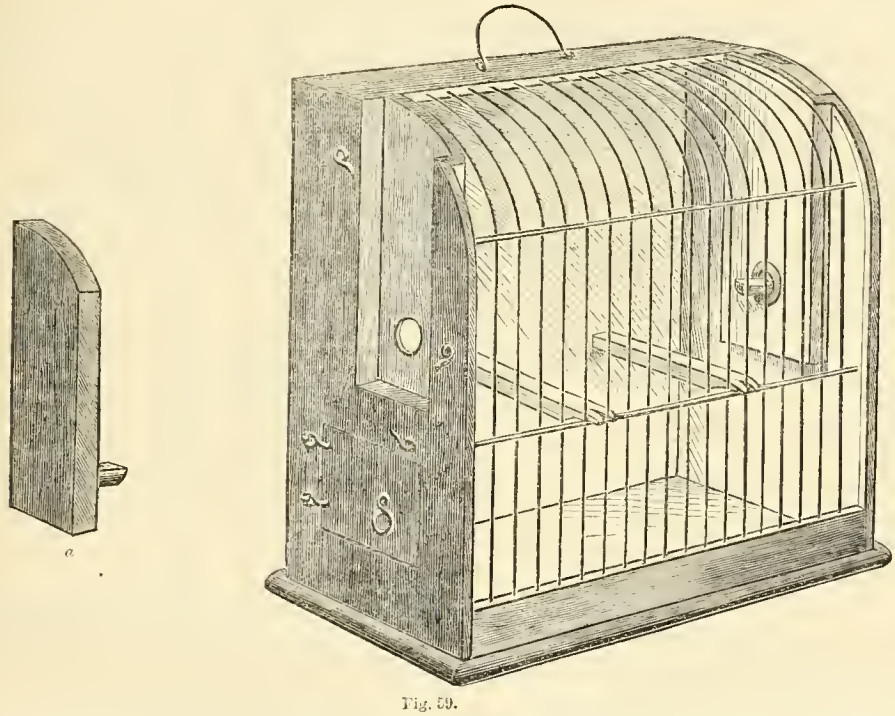


Fig. 59.

Action for Prizes at a Poultry Show.—*Whiteley* v. *Harvey and Others.*—This was tried in the Sheffield County Court on the 13th inst. The plaintiff, William Whitely, of Clough Place, St. Mary's Road, sought to recover the sum of £2 5*s.* from Messrs. W. Harvey, Edward Brown, W. W. Renton, and A. Silvester, the Committee of Management of the poultry Show held at the Bramall Lane Cricket Ground in July last, the money being the amount of first and second prizes in the classes for Brahma fowls. Plaintiff exhibited ten pens of Brahma fowls at the Show, and obtained prizes amounting to £2 5*s.*, which the defendants had refused to pay him. In defence it was contended that the plaintiff had forfeited his prize money because he had infringed the regulations of the Show by purloining eggs produced by the fowls of other exhibitors. Plaintiff denied the offence of larceny, and said he had taken no eggs except those which had been produced by his own fowls. The Judge did not consider there was anything in the regulations of the Show to entitle the Committee to withhold the prize money from the plaintiff, and therefore he gave a verdict for the amount claimed. He thought the defendants had accused the plaintiff with larceny in an unfair manner, and was of the opinion that the charge ought either to be withdrawn or prosecuted.

THE NORTH BRITISH AND THE SCOTTISH ORNITHOLOGICAL SOCIETIES.

In your issue on March 11th, Mr. Huie makes a very incorrect statement, which, as an office-bearer of the North British Columbarian Society, held in Glasgow, I feel it to be my duty to correct. He states "that the North British Columbarian Society is only the remains of the Scottish Ornithological, which was the original name, and only after he and Mr. Ure left it (they were the last of its members) the name was changed to the North British Columbarian." Having acted as Secretary for ten years to this Society from its origin, Mr. Huie will allow me to refresh his memory. The North British Columbarian Society was formed early in the year 1862, nearly two years before the Scottish Ornithological ceased to exist; and Mr. Huie, by turning to the list of prizes awarded at the competition held by the Scottish Ornithological in 1863, will find in print a presentation of silver plate from the members of the North British Columbarian, as a Society, to be competed for as extra prizes.—James Ruthven.

[The Mealy Pouter has now been lost sight of in these letters and it scarcely needs disputing whether one society was born before another was defunct.—Eds.]

CAUSE OF HONEY CANDYING.

A correspondent of "The Scientific American" has been experimenting to prevent honey candying, and states his experience as follows:—During the past autumn I have experimented as follows: I put up six 1 lb. cans of beautiful linden honey, being careful to make it into one homogeneous mass by stirring. It was thrown from the combs by an extractor on

July 20th, and put into cans on August 1st. The cans were placed respectively as follows:—One in a dark dry cellar, one each under shades of red, yellow, green, and blue glass, and the sixth can in full light. On November 8th the honey in the cellar candied to a white. November 22nd to December 10th honey under coloured shades candied, first in the red, next in the yellow, green, and blue; while the honey in full light remained transparent until January, when it soon candied, after exposure to intensely cold weather. From my experience an equal temperature would preserve certain kinds of honey, while other kinds would candy under almost any circumstances.

I think that candied honey, instead of being looked upon with disfavour, should be recognised as evidently pure. I hope, however, that the above experiments will lead others to follow up the light theory with beneficial results.

THE HUNNY BEE.

BY JOSH BILLINGS.

The hunny bee iz about 10 times the size of the hous fly—i never meszured them—they won't stand still long enuff, but i think i hav got their dimenshuns about right.

If i hav made a blunder in this matter i am ready to repent and be forgiven for it.

They are as bizzy as a type-setter on the *N. Y. Weekly*, in thoze countrys where hunny iz skarse, but where sweet meats are a drug they wont work at all.

I dont kno az we kan blame them for this, for if beefsteak lay hot and well buttered bi the roadside all the time, and bivalves were running aronnd on the half shell, peppered and salted, crying "Who will eat me?" i would like to see the man yu could hire to thrash out rye that was wet in the bundle for 10 shillings a day.

Hunny bees are built with a sting, which is quicker than a ghost when a good bizziness chance offers; but i never knu one to use it just for the devilтry ov the thing.

Theze little workers travel about five miles a day during the sweet seazon, and bring their hunny home stuk unto their legs. If thare is a lazy one in the hive he gits lynched at once. Lynch law iz the hunny bee's justiss.

Man stole this code from the hunny bees, just az he haz stole pretty mutch everything else he haz got.

Killing oph the lazy may look a little tuff, but after all thare is sumthing like mercy in it, for it iz the only way knowu az yet to put an end to their torments.

Hunny bees have a queen, but never a king; this iz a grate kompliment to the sex, and iz an argument for *Wimmin's Rights*," which the beleavers in this doktering are welkum to use without giving me kredit for it.

The hunny bees are the only nation i kno ov who have allways had a queen for their ruler, and who hav been more prosperous and have existed longer than enny people we kno ov.

I luv the hunny bees bekauze they are allwuss bizzy, and hav a stinger allwuss hot and reddy for the lazy, and for those who poke their noze into their bizzuess.—(*N. Y. Weekly.*)

"The Handy Book of Bees."—The second edition of Mr. Pettigrew's book is just published. Its object is to show how they may be kept profitably. He says in the preface—"In bee-keeping I reckon the question of profit is of first importance. Stings do not seem half so painful to the man whose annual proceeds of bee-keeping amount to £10, or £20, or £50. It is my desire, therefore, in this work to show how bees may be kept with both profit and pleasure. In addition to the profits of bees there is a fund of interest and enjoyment derived from keeping them, uplifting in its nature and tendencies."

OUR LETTER BOX.

Rump Abscess on Fowls (*Poultry-keeper*).—You have been feeding your fowls wrong. They have had heating food and are suffering from it. Your first treatment must be a table-spoonful of castor oil to each. Wash and foment the vent and hinder parts with hot (not scalding) water. After you have done so, if you find a cheesy tumour, which you may in some of them, you may disperse it by squeezing, or it will perhaps force its way through the skin. In this latter case wash it out with a sponge and warm water, and draw the lips of the opening together with a coarse thread. When you have done so, rub some ointment into the aperture, covering the stitches. Feed on ground oats or barleymeal mixed slack. All that have suffered will require to be watched for a day or two.

Egg-eating Fowls (*E. C. O.*).—It is generally believed and we think so, the eggs are first eaten for the sake of the shell, in consequence of the absence of the necessary material from the haunts of the fowls. If they have no access to lime, throw down a barrowload of bricklayers' rubbish for them. If they are in confinement give them some heaps of fresh-dug mould. If it has grass among it so much the better. This tiresome habit is generally begun by one bird, but the others soon learn it. If only one or two have acquired the vice they may be detected by close observation, as after their cannibal's meal they generally have some of the yolk sticking round their beaks. Remove them at once. It is a good plan to watch the hens when they go to nest, and to drive them off as soon as they have laid. Another plan is to put some hard composition eggs in the nests, and to let one or two lie about on the run. They get tired of pecking at them. As a rule, fowls at liberty seldom eat their eggs unless a hen drops one without going to nest, they will then run at it. Whether confined or not they are not half so much given to eating eggs that are laid in nests as those that are dropped about.

Weight of Houdans (*Jane*).—A thorough-bred Houdan cock may weigh from 8 to 10 lbs. We hear of them weighing 12, but have never seen one. A cock weighing 9 lbs. is a good one. Hens about the laying time will weigh 7½ lbs. If you have these weights you may rest and be thankful.

Canary (*M. F.*).—The box was smashed and nothing in it. Certainly no sigas of tapeworm.

Two Hives of Bees (*Triceps*).—You wish to get a swarm for a friend out of your two hives, and so manage them as to have no more swarms but plenty of honey. You can easily contrive this. Drive a swarm, as we said before, and having got rid of all the adult bees and sent away the swarm, transpose your hives, putting the denuded stock in place of the hitherto untouched hive. This will equalise the population and delay, if not entirely prevent, after-swarming. Of course the denuded stock will have to raise a queen. Give supers as soon as the bees want room.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. March.	9 A.M. Barometer, at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg	deg.	deg.	deg.	In.
We. 17	30 259	37.2	35.2	N.N.E.	40.0	45.4	35 0	73 8	33.0	—
Th. 18	30.603	35.0	31 2	N.E.	39.5	43.8	30.6	85.2	27.1	—
Fri. 19	30 146	40 0	38 8	W.N.W	39.0	47.8	32 5	6 5	31.1	0.077
Sat 20	30.129	37.2	33.7	N.	38.2	43.7	31.2	72.2	28 8	—
Sun.21	30 166	39.0	35.2	N.	38 0	42.6	31 4	72.0	32 8	—
Mo. 22	30.072	39.2	37.8	W.	38.6	50.5	33.9	79.1	30 4	0.910
Tu. 23	30 342	36 0	33 8	N.N.E.	39.0	48 8	30.3	87.8	28.1	—
Means	30.245	37.7	35.1		38.9	46.1	32.4	75.9	30.2	0.087

REMARKS.

17th.—Dry but very cold day.

18th.—Very bright sunshiny day, but extremely cold wind.

19th.—Damp with very slight rain in the morning; dull day; the wind not quite so cold as yesterday.

20th.—A dull cold day, only a few gleams of sunshine.

21st.—Another dull cheerless day, with but little sun and cold north-east wind.

22nd.—Rather dull early, but very bright afterwards all day; and a most beautifully bright moonlit night.

23rd.—Splendidly bright from sunrise till 4 P.M., then rather less so, and the wind still cold.

Temperature very much the same as last week, but the air much drier, in fact on some days remarkably dry.—G. J. Symons.

COVENT GARDEN MARKET.—March 24.

A moderate supply and prices rather advancing, especially in first-class goods. Hothouse Grapes of good quality are becoming scarce; the only variety now worth notice is Lady Downes' Seedling. Some fine Pines from St. Michaels have lately passed under the hammer, and are extremely useful. Frame Potatoes from the Channel Islands and Rounds from Malta and Goza are coming into general use.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples	½ sieve	2	6 to 3	6	Mulberries	lb.	0	0 to 0	0
Apricots	dozen	0	0 0	0	Nectarines	dozen	0	0 0	0
Cherries	lb.	0	0 0	0	Oranges	℔ 100	8	0 12	0
Chestnuts	bushel	10	0 20	0	Peaches	dozen	0	0 0	0
Currants	½ sieve	0	0 0	0	Pears, kitchen	dozen	2	0 3	0
Black	do.	0	0 0	0	dessert	dozen	8	0 12	0
Figs	dozen	0	0 0	0	Pine Apples	lb.	2	0 6	0
Filberts	lb.	0	0 0	0	Plums	½ sieve	0	0 0	0
Cobs	lb.	1	6 2	0	Quinces	dozen	0	0 0	0
Gooseberries	quart	0	0 0	0	Raspberries	lb.	0	0 0	0
Grapes, hothouse	lb.	12	0 20	0	Strawberries	℔ oz.	2	0 3	0
Lemons	℔ 100	8	0 12	0	Walnuts	bushel	8	0 12	0
Melons	each	0	0 0	0	ditto	℔ 100	1	0 1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes	dozen	3	0 to 6	0	Leeks	bunch	0	4 to 0	0
Asparagus	℔ 100	8	0 12	0	Lettuce	dozen	1	0 2	0
French	bundle	15	0 20	0	Mushrooms	pottle	0	9 2	0
Beans, Kidney	℔ 100	2	0 3	0	Mustard & Cress	punnet	0	2 0	0
Broad	bushel	0	0 0	0	Onions	bushel	3	0 6	0
Beet, Red	dozen	1	0 3	0	pickling	quart	0	6 0	0
Broccoli	bundle	0	9 1	6	Parsley	doz. bunches	6	0 8	0
Brussels Sprouts	½ sieve	3	0 4	0	Parsnips	dozen	0	9 1	0
Cabbage	dozen	2	0 3	0	Peas	quart	0	0 0	0
Carrots	bunch	0	6 0	8	Potatoes	bushel	2	6 5	0
Capsicums	℔ 100	0	0 0	0	Kidney	do.	3	0 6	0
Cauliflower	dozen	4	0 8	0	Radishes	doz. bunches	1	0 1	0
Celery	bundle	1	6 2	0	Rhubarb	bundle	0	9 1	0
Coleworts	doz. bunches	5	0 8	0	Salsafy	bundle	1	6 0	0
Cucumbers	each	1	0 2	0	Scorzonera	bundle	1	0 0	0
pickling	dozen	0	0 0	0	Seakale	basket	2	0 3	0
Endive	dozen	2	0 0	0	Shallots	lb.	0	3 0	4
Fennel	bunch	0	3 0	0	Spinach	bushel	0	0 4	6
Garlic	lb.	0	6 0	0	Tomatoes	dozen	0	0 0	0
Herbs	bunch	0	3 0	0	Turnips	bunch	0	6 0	0
Horseradish	bundle	0	0 4	0	Vegetable Marrows	doz.	0	0 0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	APRIL 1—7, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. h. m.	Sun Sets. h. m.	Moon Rises. h. m.	Moon Sets. h. m.	Moon's Age. Days.	Clock before Sun. m. s.	Day of Year.
1	TH	Linnean Society at 8 P.M.	55.0	34.4	44.7	37 af 5	30 af 6	16 af 4	0 0	25	3 55	91
2	F	Geologists' Association at 8 P.M.	57.8	36.7	49.6	35 5	32 6	37 4	25 1	26	3 37	92
3	S		57.1	35.7	46.4	33 5	34 6	54 4	51 2	27	3 19	93
4	SUN	1 SUNDAY AFTER EASTER.	56.7	35.7	46.2	30 5	35 6	8 5	18 4	28	3 1	91
5	M	Entomological Society at 8.30 P.M.	57.0	36.7	40.0	28 5	37 6	20 5	46 5	29	2 44	95
6	TU	Zoological Society at 7 P.M.	57.0	36.9	47.2	26 5	39 6	33 5	17 7	○	2 26	96
7	W	Royal Horticultural Society, Fruit and Floral Committee at 11 A.M.	57.7	36.8	47.3	24 5	41 6	48 5	50 8	1	2 9	97

From observations taken near London during forty-three years, the average day temperature of the week is 56.9°; and its night temperature 36.1°.

THE ORCHID-HUNTER IN BURMAH.—No. 1.

SO much has been written, and well written, about Orchids that it seems difficult to break fresh ground and note anything new about them useful and instructive to the horticulturist, to the lover of Orchids, and to all interested in this charming tribe of plants.

The observations of the Orchid-hunter made at their places of growth may, however, prove to be of considerable use both to the professional cultivator and the amateur. The habits of the different species, their situation, the mode in which they grow, the special circumstances of temperature to which they are exposed, their time and mode of flowering, are all matters which the Orchid-hunter has special opportunities of observing; and it is probable that there are still many small points on which the horticulturist remains uninformed, the elucidation of which may furnish valuable hints to all interested in their cultivation. The subject is not one easily exhausted, and a more perfect appreciation and knowledge of these plants and their wants may be gained from observations made on the spot.

The notes on Orchids, epiphytal and terrestrial, will specially include the chief abodes of the different varieties, regarding which more errors are extant than on any other point connected with them—errors partly caused by the people to whom they were first consigned considering them as natives of the ports from whence they were dispatched to England, and partly from the jealousy of the collectors, who were not at all desirous that their Eldorado should be discovered by the general public. A remarkable instance of an error of this kind occurs in that carefully-written and admirable work on Orchids, "The Orchid-Grower's Manual," by Mr. Williams, where it is stated that Cypripedium niveum is a native of Moulmein. Cypripedium concolor, a plant very nearly allied to it, comes from the neighbourhood of Moulmein, where it grows on the limestone rocks; but Cypripedium niveum has never been found there nor in any other part of Burmah. It comes from the Straits of Malacca, and finds its way to Moulmein by the coasting steamers, where it is much in request in exchange for Moulmein Orchids. It is thus that Moulmein has the credit of being the home of this Orchid, one of the most beautiful of the Cypripediums.

A knowledge of the correct geographical distribution of these plants is very valuable to the horticulturist, as from this he gains a good idea of the different kinds accustomed to the several circumstances of climate. In his remarks on Orchids, the description of their haunts and manner of growth, the Orchid-hunter cannot well do better than commence with a description of the Dendrobiums, the most numerous class of all the Burmese Orchids.

The nigro-hirsute Dendrobiums, a genus having small dark hairs on the new growth, and which, as a rule, flower before shedding their leaves, claim early attention, both from their beauty and the sweetness of many of their flowers, and from their not having the objection of being denuded of their leaves during the season of flowering, as is the case with such a large number of other plants of the same genus. All these individually caused a sensation when they were first introduced, and they are still favourites with all cultivators of Orchids.

The special home of Dendrobium formosum is on the hills to the south of the road running from Moulmein to Amherst. They are found sparingly scattered over other parts of Burmah, but here they are in thousands. The first sight that meets the Orchid-hunter travelling down the road to Amherst during the summer months is large baskets full of the flower shoots of this splendid plant being brought into the Moulmein market, where they are sold to the Burmese women to wear in their hair, the market price of each flower spike being about sixpence. Sometimes as many as ten men at a time are seen, each carrying two baskets slung on a bamboo full of these flowers, so that the air along the road is quite perfumed with their scent.

These Dendrobiums almost invariably grow on the Pedonk tree; and besides the two varieties commonly known to gardeners as Dendrobium formosum and Dendrobium formosum giganteum, there is a very distinct variety known in Burmah under the name of Dendrobium formosum Amherstianum. This is a charming plant, more delicate than the two preceding kinds, the yellow in the throat and on the labellum being of a pale straw colour. The racemes of this variety are slender, and the plant is quite wanting in that robustness of habit which characterises the common Dendrobium formosum. This variety is scarce, and likely to continue so, as it is not so easy of cultivation as the other varieties. It grows on the trees near the sea at Amherst, and has not at present been found anywhere else.

All these varieties of formosum grow on the branches of trees in the most exposed situations, subject to the influences of a blazing sun in the summer and to a continual downpour of rain during the rainy season; the rainfall in this part of Burmah averaing 200 inches, during the season.

Were it not for the dews at night during the summer months the plants would undoubtedly die. Thousands of the small seedlings, and some of the larger plants, as it is die every season. This shows that, although this like other Orchids requires a season of rest, it is necessary for the cultivator to imitate the nightly dews during the resting season, which is best done by giving a very slight watering at the roots in the early morning; by this means the horticulturist can not only insure the plant keeping in a robust and healthy condition, but he can improve on the circumstances of Nature by supplying during the scorching months that shelter which the plant does not have in its native jungles.

During the season of growth it is unnecessary to say that plenty of water is essential to its well-being.—E. S. B.

CUPRESSUS LAWSONIANA.

OF the many evergreen trees and shrubs of late years introduced there are none in my estimation so beautiful as

this Cypress. It is graceful in appearance and varied in habit; a close dense evergreen growth prevails in all whether the habit be upright or spreading, the former rising erect like a pointed pillar, while the other sweeps the ground with its semi-pendant arching growth. At no time is it so beautiful as in spring, when aglow with the deep scarlet of its flowers, which are dew-drop-like, suspended by the matchless green of its graceful branchlets. Especially is this the case with specimens which have been transplanted, the removal one year converting its spray into clusters of red the year following.

This leads me to point out its claims as a subject for spring floral display, if not in the parterres at least in such positions where something is required to take off that flat monotony and stiff formality which characterise present attempts at floral effect. As a tub plant it has merits which are overlooked; whilst for large vases, which in the winter months often go empty for want of fitting plants, there is none in all the class of hardy plants that for fitness can compare with a low spreading bush of Cupressus Lawsoniana. Its roots do not suffer in the least from frost. I know one in a tub about 18 inches square and 12 inches deep upon a portico of north aspect which has stood the winds, drought, and cold of the past four years without attention of any kind, and it is now as hale and beautiful as when placed there, a position that would have brought grief to a majority of plants. For vases it may be made to assume a spreading habit by taking out the growths which have a tendency upwards, and selecting those which are decidedly spreading and pendulous, the form known as gracilis being very suitable. For tubs any of the varieties are suitable, and grown in pots for decorative purposes in halls, corridors, &c., it reminds one of a tree-like Fern, having the grace and elegance of those plants without their liability to injury from the draughts of such positions.

It is, however, to its merits as an ornamental evergreen tree or shrub that I wish to direct attention, and may be allowed to say that its introduction to this country dates no further than 1855, its discoverer being Mr. William Murray, who named it in compliment of the spirited firm who purchased the results of his researches amid the vegetation of the Sierra Nevada. Mr. Andrew Murray states, "it was found on the banks of a stream in a mountain valley, growing to the height of about 100 feet. The foliage is most graceful, and the branches hang down at the tip like an ostrich feather, while the top shoot droops like that of a Deodar."

This handsome tree is now plentiful, and its fitness for general decorative purposes in pleasure grounds is apparent in many ways, and in none more than as an avenue tree along the sides of drives and approaches to mausoleums, whilst for churchyards or cemeteries it stands pre-eminent. Its hues are more evergreen than that of the Deodar, and it stands wind better, though the Cupressus Lawsoniana assumes in very bleak positions more of the character of a bush—low and spreading—than a towering tree, yet its aspect is of that grace and elegance which befits its association with monuments, and exhibits an unmistakeable sympathy with the feelings of the spectator. As a lawn tree and in the foreground of shrubberies it stands out in contrast and relief with the trees and shrubs of broader foliage, and contributes an air of lightness to otherwise heavy groups.

As a screen it has no equal in ornamental grounds. Its growth is dense, and is not so liable to split or divide as that of Arbor-Vitæ. It also bears cutting well, and grows quickly, and may be kept of any height or width. Though there are many varieties the plants vary very much in character, both from seed and cuttings. Its diversity of habit is due also to situation. In warm and sheltered places the growth is erect and tree-like, the disposition is to tower upward rather than spread outward, and yet there is no disposition to sparseness of branch and spray at the base. Do not, however, misunderstand me, for I do not intend to convey an idea that it is tender; it succeeds in positions that the Deodar does not, and yet the best growths are made where slight and distant shelter is afforded. In exposed positions it becomes more of the character of a bush than tree, its upward tendency being checked by the winds, and this causes its vertical growth to be slow, and side growth to take place more than in a sheltered situation. It does well in any soil, growing more quickly in light loam than those which are heavy and wet, and delights in a moist station, yet freed of stagnant water in the subsoil.

There are many varieties. Erecta, which grows up a close and compact pyramid, and of this there are two sub-varieties—viz., lutea with yellowish young growths; and glauca, which, as its name implies, has the habit of the species with glaucous foliage; gracilis, slender, and a more drooping habit; nana, a pigmy of the species with very compact growth, and useful for beds in winter; stricta, growing into a fine pyramid, not nearly so bush-like as erecta; argentea, with white variegation, another argentea with very pale foliage, almost silvery; and variegata aurea, with gold variegation. In fact there is a great variety of forms, which, however, are not apparent at a distance, and we have one which I do not see in lists, a perfect balloon shape, and not more than 3 feet in height, and yet not compact in growth so far as relates to nana or compacta, but having more the habit of gracilis.—G. Abbey.

NOTES RELATIVE TO THE POTATO.

I fully agree with Mr. Luckhurst that in investigating the Potato blight we must not take the experience of one year as a basis on which to rest our deductions. In this remote portion of the country artificial manures have not yet come into general use. We have many farmers of the old-fashioned class who are content to work on in the lines laid down for them by their fathers. These old stagers continue to use farmyard manure for their Potato crops, and farmyard manure alone, and not too much of that even. They invariably grow the soundest crops, and I can assure Mr. Luckhurst that what they take up are slightly larger than ordinary marbles.

No man of common sense could be so bigoted as to say that the seasons exercise no influence upon the blight. Where the predisposing agents are already in existence, a wet or dry autumn will cause a greater or lesser blight; but what we all want to find out is the primary cause of the blight. If Mr. Luckhurst's theory of atmospheric cause is correct, then why does he not attempt to show that our climate underwent a change in 1845, and that that change has existed to the present time? On this hypothesis only can I reconcile that theory.

I have not seen the pamphlet he alludes to in his last communication, nor any other treating on the view of over-cultivation. My deductions are based upon experience in observation of the nature of the esculent in question.

Going back to the year 1846, I knew a field in which the two extremes of manuring were in operation. The richly-manured half had scarcely a sound Potato in it, whilst the other half, which had been manured with almost dry, light, farmyard litter, were fairly good. Year by year I have been more and more convinced that in our great anxiety to produce heavier crops we have been working on a suicidal policy, and have killed the goose with the golden eggs. A naturally hardy robust constitution has been fed upon confectionery, pastry, and condiments until its constitution has given way under the strain. Virgin soil may act as a corrective to the invalid, but one year's treatment will not wholly eradicate ills the growth of many, especially when that soil is mixed with the destroying element. That the evil is wide-spread and universal is evident from the fact that offers of large money rewards fail to produce disease-proof seed.

As I said in my first communication, my belief is that in order to effect a cure it will require combined and long-continued effort. To be effectual it must be combined, and a matter which is now troubling our meadows in this division of the country affords me an illustration of the sort of co-operation required. Since the introduction of railways into the Lake country of England our meadows have year by year become more and more infested with the Ox-eye Daisy. Some time ago a writer in the *Agricultural Gazette* called attention to this matter, and said that as the plant was only of three years' growth, and as sheep were particularly fond of it, united action of sheep-pasturing on the part of farmers would soon eradicate the pest. Some acted on the advice, others did not; the seed was carried from the neglected meadows to those of others who were trying to rid themselves of it, and the latter found their efforts futile, and for lack of this co-operation a large proportion of our hay crop is only fit for bedding purposes. For lack of this same co-operation a large proportion of our Potato crop goes to feed our swine, or is utterly wasted.

If agriculturists wait for some specific which will suddenly restore to us sound crops of Potatoes, I am afraid they will be doomed to wait in vain. God helps those who help themselves, and I am confident in the belief that we have the remedy within our hands.

Let us take care that our high-pressure system of farming does not lead us into the same fix with other necessities of

life. The reflection whether we may not behave so well to the land as to endanger our grain and root crops is not so utopian and visionary as some people may be apt to suppose. Already the cry of raking-up subsoils is raised, as though the surface matter was satiated with its feast.

We are doing away with our old system of allowing the earth to recruit exhausted nature under fallow. Are we, or are we not, preparing ourselves for "a famine of the land?" History oft repeats itself, and it may be as well to pause before we have advanced too far, and ask ourselves the question, "Will the soil bear the constantly increasing strain we are placing upon it?"—Beta.

CALADIUM CULTURE.

This beautiful and easily-cultivated genus of ornamental foliage plants has of late years become very numerous and popular.

They should be potted when growth commences, using a compost of two parts peat, one part turfy loam, one part silver sand, and plenty of drainage, and be placed in a brisk bottom heat, and a moist temperature of 70°. By frequent potting theysoon make large plants. Slight shading is necessary during strong sun, yet they should at all times be fully exposed to the light, as too much shade and strong heat produces drawn and thin foliage, so that if removed to a cooler temperature or the exhibition tent they have a flimsy appearance. Syringing is beneficial to these as well as most other foliage plants; rain water should be preferred. We labour under the disadvantage of having to use spring water rising from chalk, and the consequence is that plants present the appearance of having had a sprinkling of whitewash. Sponging is a benefit to such plants as Crotons, Dracænas, &c., as it dislodges insect pests; but it does not do for Caladiums, for it injures the beautiful bloom on the leaves.

When their beauty begins to fade, gradually dry them off by giving less water, but on no account should the soil be dust-dry all winter, or when starting time arrives the bulbs may be found to have disappeared from "dry rot."—G. P., jun.

SEAKALE FORCING.

Now that the Seakale question has cropped up, and as "H." asks, "Can Seakale pots be dispensed with?" I will give two instances where good Seakale has been forced without the aid of pots or boxes. A plan was in operation more than twenty years ago, and was carried out as follows:—

The beds were raised a little above the level of the surrounding ground, and between each bed was a trench about 2 feet deep and 2 feet wide, with, I believe, a single brick wall on each side built pigeon-hole fashion. These trenches were for the fermenting material, which was filled up to the level of the walls, and the crowns were then covered with the common Bracken Fern to the depth of 18 inches. This plan produced some of the best Seakale I have ever seen.

The next plan was on the level ground in quarters, not merely beds, but planted at equal distances; in this case sticks were merely stuck round the crowns, and their tops brought together cone-shaped, then a little long litter placed round the sticks, then the fermenting material. This plan also answered very well. This was in a large forcing establishment. Many people, I believe, force their earliest batches in Mushroom houses, which is a saving of labour, and may be very convenient, and the Kale quickly produced; but still I am no convert to that system. I am of opinion that No. 1 plan is commendable for early forcing. I cannot clearly see that pots or boxes can be dispensed with, even if sticks are used, which seldom last more than one year; and as pots are so liable to be broken, I think boxes are the next best, and perhaps the cheapest in the end.

Having a lot of spare drain tiles of a large size, I place two of these together on their ends; the bottom edges coming together form a sort of oval, the top is covered with a piece of slate. This plan answers very well. I usually place a stick on the top of the fermenting material just over the tiles; this is a guide, and saves that probing process with the fork tines, which in the case of pots is the primary cause of breakages.

Now, No. 1 plan always struck me as a step in the right direction. If the heating material can be more equally divided between root and branch it must be a more natural way of forcing. What could be better than such a plan for Asparagus, the beds of course to be covered with glass? I believe a good deal of the best forced Asparagus is grown in France on a similar principle.

I think that many of us have for a long time been forcing Seakale and Rhubarb at the wrong end. Even if these roots are taken up to be forced there is a great mutilation, which must to some extent weaken the roots, and as a matter of course the forced heads cannot reasonably be expected to be so fine as from the outdoor forcing.—G. R. Allis.

GERANIUMS FOR BEDDING.

I want to induce all to obtain and none to throw away the following:—Gloire de Corbeny, salmon; Lady Kirkland, Bonfire, Warrior, Vesuvius, Lucius, the best bedder ever raised; Claude Lorraine, Maia, Creed's Seedling. *Bronze*—Black Douglas, Emperor of Brazil, Maréchal McMahon, Kentish Hero (for large beds), Sybil, Dwarf. *White-edged*—Beaton's Nosegay, Flower of Spring. *Silver Tricolor*—Mrs. John Clutton, Charming Bride. *Golden Tricolor*—Mrs. Pollock. Edging for Iresine: Crystal Palace Gem.

In leaving out Jean Sisley I do it with regret, but no one will obtain a mass of bloom from her.

A really good white is yet to be found, and Madame Vaucher had better be kept. All your readers are glad to learn the name of any really good plant. We know the best Roses now, would some one have an election of bedding Geraniums? It would save much money and time.—Age.

ROYAL HORTICULTURAL SOCIETY.

Mr. Cutbush has very ably exposed the miserable vacillation of the Royal Horticultural Society's Council and the injury thereby inflicted on those on whom, after all, depends the future of the Society, for I suppose it will be allowed that if there are no exhibitions there will be an end of the Society; and I think we must come to the resolution not to send anything more until the prizes of last year are paid and a schedule worthy of the Society acted upon, for it seems that issuing one and acting on it are two different things at South Kensington. I allude to the prizes of last year, because I hear it is coolly debated whether they shall be paid or not. If there is any hesitation upon the subject it will be the duty of the exhibitors to at once try whether the Council cannot be compelled to pay. There is nothing that I am aware of in their charter to enable them to act dishonestly.

I know that there is one reason that keeps some exhibitors from acting on this suggestion—lest it might appear that they had less confidence in Mr. Barron than in his predecessors; but let it be clearly understood that, on whatever other point the exhibitors may differ from the Council, they are unanimous in their approval of the step which placed the management of their exhibitions in the hands of one so generally liked and so thoroughly competent as he is. In him at any rate they would be sure to find no dilatoriness, want of courtesy, or firmness.—An Exhibitor R.H.S.

I have informed myself of the numerical strength of the several classes or parties, so to speak, who, divided against each other, and, indeed, against themselves, have been and are working out the ruin of that great Society which it was their bounden duty to support. I was happy to find that the number of those who remain attached to a legitimist policy, and ready to support the few leaders of horticulture proper which are left to us, is greater than I expected; indeed, I cannot otherwise account for the singular transaction which occurred with regard to the report at the anniversary meeting when that document was virtually condemned, together with the framers thereof. On that occasion the Council were saved from resignation, not upon the merits of the case, but by the charming manner and high gentlemanly bearing of their chairman. After this occurrence I own to having cherished a shadow in the form of a hope that something of the following kind might have been effected—to wit, that a fusion between the old independent horticultural party and that of the local Fellows might result in the formation of a Council containing a good proportion of the former. That these two parties (in Council) having agreed to act honestly together might have together gone to the Commissioners and so entered into arrangements of such a nature (upon the basis of cancelling the lease) as to leave all parties in the possession of their desired privileges. The thing is, I believe, still possible

in some shape or another. Should anything feasible of this kind turn up, I and my friends will be ready to give it their support. If not, and the Council stick to their policy of making use of these usurper's powers to retain the lease and starve the Society, then I counsel on the part of my brother horticulturists a firm, compact, and persistent opposition to an evil and selfish influence.—R. Trevor Clarke, *Welton Place.*

EARLY WRITERS ON ENGLISH GARDENING.

No. 4.

SIR HUGH PLATT.

An inventor who devotes himself to the completion of some one work which if effected will be of national importance is worthy of admiration—such men were Arkwright perfecter of the spinning jenny, Watts of the steam engine, Wedgewood of porcelain, and Stephenson of the railway system; but a schemer—a man who potters over small things, all insignificant, and flitting from one to others as unimportant, is one who is usually an annoyance and too often a mere waster of his time and money. Such a man was Sir Hugh Platt.

I have vainly sought to discover his parentage and the place and date of his birth, but it is evident that early in life he was in the metropolis, for he tells in one of his prefaces that "he had drawn the longest line of his life within the liats and limits of London."

In the Register of Lincolns Inn is recorded that on the 4th day of May in the thirteenth year of Elizabeth's reign he was admitted a student, introduced by John Pinkerynge and Thomas Lodge. He was therefore entered as a student in 1571. He probably was then about twenty, and if so would be only fifty-seven at the time of his death in 1608. This date last named is certain, for he executed his will on the 19th of October, 1608, and he died between that day and the 1st of November of the same year, on which day the will was proved. He describes himself as of Stepney in the county of Middlesex, knight, and wisely, being a lawyer, made his will very plain and brief. Having previously provided for his sons, he left his wife Judith all his property and sole executrix, relying that she would provide for their daughter of the same christian name, and specifies none of his property except a brewhouse in the City with other houses thereto belonging.

Charles Bellingham, who edited the sixth edition of Sir Hugh's "The Garden of Eden," speaks in its dedication of his "near alliance" to Sir Hugh, and it is not improbable that Bellingham had married the daughter mentioned in his will.

The sons seem to have been well provided for and prospered, for in Hornsey Church is a monument to the memory of William Platt, founder of some fellowships in St. John's College, Cambridge. He died in 1637; and the inscription tells that he was son of Sir Hugh Platt of Kirby Castle, Bethnal Green, which then was included in Stepney parish. That monument, kept in repair by St. John's College, bears testimony to the good position of the Platt family, for on it are blazoned more than thirty coats of arms of families allied to it. The wife of Sir Hugh had pre-deceased that son two years, for in the register of the same church is this entry, "The Honourable Judith Platt, wife of Hugh Platt, Knight, buried Jannary 28th, 1635." The wife of Robert, another of Sir Hugh's sons, was also there buried in 1656. Lysons thinks that it was also Sir Hugh's burial place; but there are no registers of the date when his death occurred.

In 1594 Sir Hugh resided at Bishop's Hall, about a quarter of a mile eastward of Bethnal Green, a residence of Bishop Bonner's, if he was not also its builder. But Sir Hugh at the time of his death resided at Kirby Castle. It was built in Queen Elizabeth's reign (1570) by Thorpe, the architect of Holland House, for John Kirby, a London citizen, and who seems to have suffered from the over-expenditure. He, as well as other sufferers from a similar cause, was satirised in a doggerel rhyme—

> "Kirkeby's Castell and Fisher's Follie,
> Spinila's Pleasure and Megse's Glorie."

Kirby Castle was built on the site previously known as "The Blind Beggar's House." That "beggar," believed to be a son of Simon de Montfort, Earl of Leicester, was left for dead at the Battle of Evesham in Henry III.'s reign; but a baron's daughter searching for her father's body found young de Montfort, married him, and for safety they assumed the character of beggars. Their only child was the "pretty Bessie" of the ballad in the Percy "Reliques."

> "'My father,' shee said, 'is soone to be seene,
> The silly blind beggar of Bednall Green,
> That daylye sits begging for charitie,
> He is the good father of pretty Bessie.'"

In those days no societies existed for the promotion of botany or gardening where those who delighted in their cultivation could associate. The only substitute for such societies was acquiring an intimacy and correspondence with congenial fellow students. This was done by Sir Hugh, who, Bellingham says, had communications with every gardener of any note in England who tested his suggestions, and among them were Hill, Taverner, Pointer, and others who are also mentioned by Gerarde. They deserve a brief memorial here. Sir Hugh directs how Carnations, Gilliflowers, and Pinks may be grafted "upon one root of Carnations;" and he says this was imparted to him by "Mr. Jarret, the chyrurgeon in Holborn." Gerarde also knew him, and describes him as "a curious searcher of simples." Tulips were one of his especial favourites, propagating them by seeds and offsets for twenty years, and every season producing "new plants of sundry colours not seen before, all which to describe particularly were to roll Sisyphus's stone or number the sands." Jarret was also a correspondent of the botanist Clusius, who speaks of him with praise and acknowledgements of the plants received from him.

The authority Sir Hugh most frequently quotes is "T. T.," and this was evidently Thomas Tusser, who was his contemporary, of whom you published my memoir some months since. "Master Hill" was also one of his authorities, and probably the Thomas Hill whose portrait and biography were the first of this series. "Andrew Hill" is a different authority quoted by Sir Hugh. He quotes (Garden of Eden, i., 36) "Gardiner's Kitchen Garden, printed 1599," a book unknown to me.

Although Sir Hugh derived from others most of the garden knowledge he published, yet much of it was from his own experience, and he had more than one garden. He tells of the results of pruning frost-bitten Roses "upon divers standards at Bednal-green," and that by cutting down Beans he had from the same plants a second crop—"This I have proved in my garden in St. Martin's Lane." In the same volume there is the "old, old story," of dishonest seedsmen and poultry dealers, for Sir Hugh indignantly writes, "I would there were some fit punishment devised for these petit coseners, by whose means many poor men in England do oftentimes lose not only the charge of their seed, but the whole use and benefit of their ground after they have bestowed the best part of their wealth upon it. Cheapside is as full of these lying and forswearing huswives as the shambles and Gracechurch Street are of that shameless crew of poulters wives, who both daily and most damnably, yea, upon the Sabbath-day itself, run headlong into wilful perjury almost in every bargain which they make, selling cocks for capons when they have pared their combs and broken off their spurs; old hens for pullets when they have broken their pinions and brestbones."

If space could be allowed much more I should like to quote, but let me conclude with a list of his very varied works, and for the most part published after his decease.

"The Jewel House of Art and Natnre; Experiments in Husbandry, Distillation, Chemistry, &c. 1594. Edited by D. Bryant in 1653."

"H. P. Manuale, &c. 1594." A Selection of Moral Sentences from the Fathers and Patriarchs.

"A Discoverie of certain English Plants. 1595."

"Delights for Ladies to Adorn their Persons, Tables, Closets, with Bouquets, Perfumes, and Waters. 1602." In the Preface he hopes that it will not receive the same unkind acceptation as his first fruits, "The Jewel House of Art and Nature," and his hope was realised, for I know four subsequent editions.

"A New, Cheape, and Delicate fire of Cole-balls. 1603." Is merely recommending coal dust to be made into a paste with loam and formed into balls for fuel.

"Florae's Paradise Beautified with Sundry Sorts of Delicate Fruits and Flowers. 1608." This contains much good gardening information, combined with much mysticism and reliance on planetary influence.

"The New Founde Arte of Setting Corn. 1650." This was a decoy publication. It advocates spade husbandry, and "the new founde arte" probably was dibbling, but it is not revealed, and the reader is informed that of the secret more might be heard by inquiring at the printer's.

"The Garden of Eden or an Accurate Description of all

Flowers and Fruits Growing in England, with Particular Rules How to Advance their Nature and Growth. 1652. Edited by C. Bellingham." The sixth edition is dated 1675. It is only a reprint of "Florae's Paradise." The second part of the "Garden of Eden," all from MSS. left by Sir Hugh, was published in 1659 and 1675.—G.

MR. W. PAUL'S EXHIBITION OF SPRING FLOWERS.

For a few days longer this Exhibition invites inspection at South Kensington, and those amongst flower lovers who have not yet seen it would do well to do so, as it is a display worthy alike of public patronage and of the reputation of the able and spirited proprietor of the Waltham Cross Nurseries. When Mr. Paul exhibits something good is expected, and is invariably provided, and it was the unanimous opinion of the many spectators on Saturday, the first day of the Show, that the collection is fully equal if not superior to those of former years. The plants are arranged in the western arcade and reach nearly its entire length. They comprise Roses, Camellias, Hyacinths, Tulips, Narcissus, and other popular flowering plants, with a background of Palms and foliage plants.

The Camellias are excellently-bloomed plants in the perfection of health, and comprise besides those we have previously noticed, Dante, white; Madame Lebois, fine salmon red; Centifolia Rosea; Jargioni, white; Archduchesse Augusta, crimson, fine deep colour; Perpenti, rose; Pius IX., rose, very free; Lucretia Guzarrini, rose, white-striped, good form and free; Belle Jeanette, red, shell-like petals; Teutonia, var. amabilis, rose and white, attractive; Souvenir d'Emile Defresne, white and red, very striking and free; La Reine, fine white; Valtavaredo, rose, &c. All these are varieties of sterling merit.

The Roses both in plants and cut blooms are an attractive feature and receive a good share of attention. Well-bloomed plants of John Hopper, Céline Forestier, Victor Verdier, Duke of Edinburgh, Princess Mary of Cambridge, and Mdlle. Marie Rady make the principal show; still the smaller plants of the newer varieties possess a magnet-like influence in attracting attention. Of these Richard Wallace is good; St. George is a rich velvety crimson with a good substance of petal; Diana is of the type of Jules Margottin, but richer in colour. It is evidently very free and gives promise of usefulness. Star of Autumn is a flower of fine build and full. It is of the John Hopper type, but deeper in colour than that Rose. Peach Blossom is a new Rose of globular form and delicate colour. Amongst Tea Roses Anna Olivier is a fine light flower with coppery centre and good substance of petal; Catherine Mermet has lovely blooms; President is charming; Souvenir d'un Ami is fine, as are Comte Taverna, Souvenir d'Elise, and others. In boxes of cut blooms which have many admirers, were John Hopper, Prince de Portia, Mdlle. A. de Rougemont, Fisher Holmes, Mdlle. de Stella, Pierre Notting, Paul Verdier, La France, Lord Clyde, Mdlle. Bonnaire, &c. These were excellent for the season, La France being especially admired.

We now turn to the Hyacinths. These are a show in themselves. To this flower Mr. Paul devotes special attention, and has been instrumental in introducing some of the first varieties of the day. The plants are characterised by sturdy vigour rather than mere length of spike—that is, they have breadth as well as length, and, as a rule, the bells are remarkably fine. Of the Reds, Vurbaack is the best, being of high colour with a fine spike; Garibaldi is exceedingly rich, as also is Prince Albert Victor, and Linnæus. Solfaterre, Koh-i-noor, Fabiola, Princess Clothilde, Prince of Orange, Macaulay, Von Schiller, and the old double Waterloo have just claim to honourable mention.

The Blues are well represented by robust spikes of King of the Blues, General Havelock, Mimosa, Baron Von Tuyll, and Haydn (mauve), amongst the darks; the lighter shades having as the best Lothair, very good; Lord Byron, Princess Mary of Cambridge, fine bells; Admiral de Ruyter, silvery bells of good form and substance; Czar Peter; Blondin, extra; La Candolle, Charles Dickens, and Couronne de Celle. The best of the new sorts are Von Moltke, dark blue and white; Baron Beust, light blue and white; and Christy Minstrel, very dark.

Amongst Whites the best are La Grandesse, the first white Hyacinth of the day; L'Innocence, fine; Miss Nightingale, pure; Paix de l'Europe, fine spike; Baronue Van Tuyll; Snowball, massive bells; Mont Blanc, Leviathan, Alba-Maxima, Madame Van der Hoop, and Snowspike (new). This is very pure with beautifully formed bells and a nice spike. It is a very promising variety.

Of the Yellows, Bird of Paradise and L'Or o'Australe are the best, the bells of the latter being as fine as those of the light blues, which is not the case with yellow Hyacinths generally.

Tulips were a very gay bank, and comprised Proserpine, rose purple, fine; Bride of Haarlem, crimson and white; Cardinal Gold, scarlet and gold; Cerise Gris de Lin, chocolate and fawn; Bacchus, red; Belle Alliance, glowing red, dwarf; Rosa Mundi, rose and white; Grootmeester Von Maltha, crimson and white; Standard Royal, fine, white and bright rose; Leonardo da Vinci, glowing scarlet; Lady Palmerston, Brutus, and Standard Golden were very distinct and brightly striped with red and gold; Cottage Maid and Rose Luisante, rose and white; Chrisselora, yellow; and Pax Alba and Pottebakker, white.

The Narcissus are remarkably good, the best being Bathurst, Queen of the Netherlands, Glorious, Florence Nightingale, Bazelman Major, and Sir J. Paxton. These are the best of the fine collection.

The groups enumerated with Primulas, Cinerarias, Deutzias, Spiræas, Cyclamens, Lilies, &c., constitute a display worthy of patronage, and of the gay period of Easter week.

ROYAL BOTANIC SOCIETY.

The lingering winter reaching far into spring has not hitherto brought flower-show weather, but Wednesday the 31st, for the first Regent's Park Show, was mild, yet dull. But the dulness without was atoned for by the brightness within, for the Show was a good one, nearly all the classes being filled with excellent examples of culture. We were obliged to leave before the awards were completed, but a general idea of the Show may be gathered from the following jottings. The plants were arranged in the corridor reaching its entire length, and occupying a portion of the conservatory.

In the class for twelve stove and greenhouse plants (open), Mr. Ward had Anthurium Scherzerianum, with the finest spathes perhaps ever seen; a good Eriostemon, Franciscea, Cytisus, Lycaste Skinneri, with upwards of twenty blooms; a fine Cypripedium villosum, Azaleas, Heaths, &c. Mr. Wheeler had a good group containing a large Chorozema, Pancratium fragrans, Imatophyllum, &c.; the same exhibitor had also a mixed group of plants.

In the class for six greenhouse Azaleas in 12-inch pots (amateurs) Mr. Ward's plants were dense masses of fine blooms. Stella, punctata omnicolor, A. Borzig, Model, Roi des Beauties, and Madame Vander Cruysseu. Nice plants also came from Mr. Wheeler, and a larger half dozen from Mr. Child, gardener, Garbrand Hall.

Six greenhouse Azaleas in 12-inch pots (nurserymen), Messrs. Cutbush & Son had small but well-bloomed plants.

In the class for six Chinese Primulas (open) Mr. James and Mr. Wheeler sent plants which had been finer a fortnight ago than now. They were large, with fine blooms, but were lacking in freshness.

In the class for nine Cinerarias (open) Mr. James had splendid plants of William Reeves, Attraction, Treasure, Right Hon. B. Disraeli, Purple Gem, very fine; Agrippa, Pandora, Floribunda, and Admiration. He also exhibited a group of smaller plants of remarkable substance of bloom and distinct colours.

The Lilies of the Valley were very good, the pots from Mr. James being vigorous in foliage and bloom. Those from Mr. Child being also good; while Mr. Tom's were more floriferous than either, but with smaller flowers.

Hyacinths had a fine cheery effect collectively, both by their numbers and contrasting colours. There were also undoubtedly some fine spikes, but it is not less certain that there were still more that can only be regarded as moderate. In the amateurs' class Mr. Douglas had spikes worthy of himself; and very good plants also could be picked from the collections of Messrs. Potts, Toms, Collins, and Weir. In the nurserymen's class W. Cutbush and Sons were in the ascendent; and Messrs. Carter & Co. and Barr & Sugden staged some charming flowers. In the class for single or compound spikes Messrs. Cutbush, Mr. Douglas, Barr & Sugden, and Mr. Toms competed.

The Tulip classes were, as usual, very gay, and contained some splendid flowers. In the amateurs' class for four varieties Mr. Douglas had massive blooms of Proserpine, Keizer Kroon, Vander Meer, and Pottebakker. Mr. Toms had Fabiola, Rose Luisante, Cerise Gros de Lin, and Pottebakker. Mr. Weir had the same varieties as Mr. Douglas, but substituting Vermillion Brilliant for Keizer Kroon. In the nurserymen's class W. Cutbush & Son had remarkably dwarf-grown pots of the above-named varieties, and Messrs. Carter and Barr & Sugden staged excellent collections.

In the class for six Deutzias Mr. Douglas had snowy columns, with fine blooms and good foliage. Mr. Child had standard plants. Messrs. Carter, Mr. Toms, and Mr. James also entered smaller but well-bloomed specimens.

In the class for twelve Cyclamens a fine effect was produced by the two champions, Mr. Little and Mr. James. Those from Mr. Little were marvels, and those from Mr. James were models of culture. Each exhibitor also staged imposing collections of this attractive flower.

In Clematis Mr. Wheeler was the only exhibitor with nicely-bloomed plants of the best varieties. He had also six forced shrubs, four Rhododendrons, an Azalea, and a Lilac.

Amongst new plants Messrs. Carter had a brightly-marked

Coleus Duke of Edinburgh and a bold-foliaged fimbriated variety, Mandarin; also a hardy purple mauve Primrose, Lady A. Taylour. Mr. Williams had his new Anthericum variegatum, Alsophila Van Geerti, Encholirion corallinum, and the graceful Palm Geonoma gracilis. Mr. Douglas also sent a fine Amaryllis, Sir J. Cathcart. Amongst the "new" plants also was a good specimen of Dendrobium fimbriatum oculatum from Mr. Stevens, gardener to G. Simpson, Esq., Reigate, laden with its bright yellow flowers. Mr. C. Turner, Slough, sent a basket of Double Violets of the Neapolitan type. The plants were sturdy and floriferous. Mr. W. Paul sent a new Rose, Star of Waltham, which is undoubtedly a fine dark Rose; and Mr. Bennett, Manor Farm Nurseries, sent Tea Rose Marie Guillot, but its delicate petals were injured in transit; also a new Hybrid Perpetual Comtesse de Serenyi.

Amongst the miscellaneous groups, which were an effective feature of the Show, were Mr. Williams's stove and greenhouse plants, consisting of a fine specimen of Imatophyllum, a good Franciacea, Aërides Fieldingi, Dendrobium thyrsiflorum, Cymbidium eburneum, Amaryllis Mr. Little, Tillandsia Lindeni, Ferns, &c. A beautiful collection of Roses in pots, also boxes of cut blooms, were sent by Messrs. G. Paul & Son, Cheshunt. The plants were good, and the blooms clean and excellent. La France, Richard Wallace, Paul Verdier, Edward Morren, Duke of Edinburgh, Madame Willermoz, Céline Forestier, a fine group of Cheshunt Hybrid, Madame Lacharme, Captain Christie, and a charming new Tea Rose of a rich salmon colour, Mdlle. Marie Finger, are amongst the most attractive of this creditable contribution. A box of cut blooms of Maréchal Niel from W. J. Woodley, Esq., Oakwood Lodge, were also very attractive.

Mr. C. Turner sent a group of two dozen Ivies in pots, excellently grown plants, and his bank of richly berried Aucubas were very effective.

Mr. W. Paul staged well-bloomed plants of Camellias, and a box of beautiful cut blooms; also a collection of Waltham White Primula with gigantic flowers. Messrs. Carter & Co. staged a collection of fifty Hyacinths with many good spikes and well-finished trusses, a glowing bank of Tulips, and excellent plants of Spiræa japonica. Messrs. Barr & Sugden had similar groups with a showy collection of Narcissus. Thus was composed the first Exhibition at Regent's Park, and which will compare favourably with its predecessors of the same period of the year.

THE MULCHING OF FRUIT TREES.

It is a common and a good practice to cover the surface of the ground in autumn over the roots of newly-planted fruit trees with good manure, both to act as a protective against the weather, and as conveying nourishment to the soil by the rains washing down its virtues.

Now, at this period of the year should that surface-covering remain over the roots, or should it be removed? There is no question as to its benefit during winter, but it is not at all certain that its removal during the spring is an advantage or not. Probably nine persons out of ten would say, "Oh! leave it on, of course."

Now, in ordinary free-growing trees, as Apples, &c., the point is not of great moment; but in the case of trees planted on a south wall, Peaches, Nectarines, &c., it is absolutely necessary that the best possible practice be adopted to induce their free growth. The first condition to secure to that end is root-action as early in the spring as possible to continue the supply of sap after that stored up in the branches has been appropriated by the bursting buds. For this there must be earth heat, as, until a certain degree is reached, the roots will not move at all.

Now is it not reasonable to suppose that this necessary earth heat is imparted by the sun sooner and quicker when the surface is exposed than when it is covered? The difference in heat of the surface of a south border between (in April and May) being covered and uncovered is very great.

Last year out of six newly-planted Peach trees the surface-mulching was drawn off five of them every morning, and pushed on again at night. It was only the work of five minutes a-day. The five trees flourished admirably, but after the first break of the buds the growth of the covered tree was stubborn, it became infested with insects, and it never did any good. This is a simple but important subject for abler men than—A Young Gardener.

NOVELTIES IN THE ROYAL GARDENS, KEW.

In the house No. 1 must be mentioned Phrynium sanguineum, chiefly beautiful from the scarlet bracts subtending the branches of the panicle. The colour is similar to that of Rhubarb leafstalks when in the most brilliant condition. In contrast to these the flowers are white, and the entire inflorescence would be most attractive in the choicest bouquet. Novelty is ever desired, and this could be used with good effect from its singular form as well as for its colour. It lasts in perfection a considerable time. In gardens it was first called Maranta sanguinea, and the well-known cultivation for that genus is the best for this. Out of flower it is ornamental, not only from its peculiar habit of producing tufts of foliage on long leafless stems, but from the purple under-surface of the Maranta-like leaves. It was figured in the "Botanical Magazine" of 1852; a volume, we may remark, which contains many plants of special interest introduced about that time, and now established in our gardens—Jasminum nudiflorum, Lilium giganteum, Calanthe vestita, Paulownia imperialis, Nymphæa gigantea, N. Devoniensis, Rubus biflorus (R. leucodermis), and several others. The blue Meconopsis Wallichi is there also, it has recently been re-introduced after being lost for many years.

In the Conservatory we observe Podalyria calyptrata, an old plant seldom seen, though very ornamental from its profusion of pink and white Pea-like flowers. It is easily grown, and flourishes well in soil consisting of rather more than half peat, and may be increased from seeds or cuttings. Orobus vernus is here very attractive, and is well worth forcing for its flowers of purple turning with age to a kind of steel blue. The foliage is very pretty, and of a lovely green.

Some pots of Lachenalia tricolor var. lutea are very ornamental in the Cape house. This genus has been sadly neglected, though, perhaps, not more so than bulbous plants in general. Interest in this class is certainly reviving, and is taking the special attention of several cultivators. The cultivation of the above is very easy, and by a little management may be had in succession for a considerable time. They are grown best in rich sandy loam, and requiring a season of rest, must always have water according to their condition. On the same shelf is a plant of Scilla peruviana var. glabra. The colour of the flower is very good, almost like S. siberica. It differs from S. peruviana by the leaves not having a ciliated margin, though quite distinct from the common glabrous variety Ughi.

Gardenia Stanleyana rarely exhibits flowers; recently, however, it has been conspicuous in the stove with a number of its extraordinary trumpet-shaped blossoms, altogether unlike its well-known congeners. The corolla is about 9 inches long, the slender tube expands into a bell-shaped mouth, with a spreading limb of five ovate segments, about 4 inches across from tip to tip. Its colour is white, spotted with purple, and a band of the same colour runs down one side of each lobe. To cause it to flower we advise that plants be at once potted, using a mixture of rather more than half peat with fibrous loam, the whole enriched with dung; then plunge in bottom heat of about 85° during the time of growth, after the completion of which remove from the bed, and during winter give as little water as necessary. If the plant intends to flower, buds will form about the early part of next year, and may be perfected about this time. Rich feeding seems important in the cultivation of Gardenias.

OUR BORDER FLOWERS—BARRENWORTS.

Much might be said respecting this charming group of spring and early summer flowering plants. A collection—or may I say a selection?—needs only to be seen to be appreciated. Had they been an expensive and difficult tribe to cultivate perhaps they would have attracted more attention. I regard them as among the neglected occupants of our rockeries and herbaceous borders. In many places you look for them in vain; you may go from place to place and peer into every nook, but you see no plant of Epimedium. Why is this? Is it because they are unknown, or that they are beneath the cultivator's notice? If we want to see those gems of spring we must look for them where herbaceous plants are cared for and are carefully tended. With this as other plants, it is not enough to just thrust them into the ground and leave them to chance.

We have one at least that is called native by us—Epimedium alpinum, but it has not been my good fortune to the present time to stumble on it at home. I have found these plants of great service in the spring time as pot plants in the spring garden, and in the borders they are not difficult to manage, and when once well established they last a long time,

and will bear a considerable amount of hardship. Generally speaking they are a moisture-loving race, but should on no account be exposed to stagnant water. They are very useful where cut flowers are in request, their lovely flowers and beautiful foliage commending them for all purposes that flowers can be put to. I find that good drainage, a moderately moist exposed situation on rockery or border, a compost of good loam, sandy peat in equal proportions, a little leaf mould, with a little coarse sand and grit is essential to their well-doing. They require a depth of 18 or 20 inches of soil to develope their character.

If required for pot culture they can be kept plunged in any out-of-the-way corner when they have matured their growth; but they should be attended to with water when they require it. Epimedium rubrum is to my mind one of the foremost of the train, it is of free growth when well established, and in bloom it has a grand appearance; E. sulphurea is a very desirable plant, especially on the rockery; E. pinnatum elegans affords a fine contrast, and is one of the best of the family; E. macranthum is a very desirable plant, and when well established presents a pleasing feature on the rockery or in the border; E. grandiflora should be in all herbaceous borders. This variety affords a grand contrast in colour among the red and yellow kinds; being white makes it still more desirable. E. alpinum should have a moist situation at the foot of the rockery. It will also do well in a moist peat bed.

Fig. 60.—Epimedium alpinum.

The Epimediums are a widely distributed but interesting family, increased chiefly by division after they have made their growth. I have not been able to secure seed from any of the kinds. The early blooming varieties are well adapted for the spring garden, grown in pots and plunged where they are required, to be removed when the bloom is passed. Sometimes they suffer from frost in the spring. I find that a good-sized pot inverted over them is a sufficient protection.—Veritas.

THE VICTORIA AND PARADISE NURSERY, UPPER HOLLOWAY.

Mr. B. S. Williams' establishment is known as amongst the first of its kind in this country. Its prominent standing has been secured by the thorough knowledge of its proprietor in practical plant-culture, and the enterprise he has brought to bear in commercial horticulture. His policy has not been to bury himself in his nursery and, hermit like, to shut himself out from the world, but he has by every legitimate means sought not only to make the charms of plants known, but has taught how they may be successfully grown. He has by this means achieved honourable fame, and has established a name which is familiar in home and continental garden literature.

There are establishments where the glass structures are more numerous than are to be found in this nursery, but very few where they are larger and better adapted for their purpose, and fewer still which contain better examples of skill in plant-growing and superior choice specimens.

In Palms and tree Ferns the nursery is especially rich, such, indeed, as we have not seen in any corresponding establishment in Britain, and only in one or two of the great continental plant emporiums.

In the hardwooded department the Azaleas are superior specimens of health combined with size. When in bloom, or out of bloom, these splendid plants are worth going a long journey to see, so remarkable are they for their general excellence.

The Camellias are also in exceedingly good order; indeed, no collection could be more thoroughly healthy and clean. Their first blush of beauty is over, yet fine blooms of the following good varieties are still more or less plentifully distributed over the plants:—Etoile Polaris, small red; Lemichezi, fine rich pink; Comtesse Eostans, pink and white mottled, good; Henri Favre, fine rosy salmon; Il Cygno, white; Jubilee, white marbled, very fine plant; Montironi Rosea, fine; Madonna, blush; Resplendens, Imbricata, Archduchesse Marie, Duc de Bretagne, Wilderi, &c.

The collection of Heaths is extensive, and the plants are in thorough good trim. It is not often that such plants of the good old Erica. Cavendishi are to be found now-a-days with health and size going so well together. There is an enormous plant of E. depressa—not, however, to be there much longer—said to be nearly a hundred years old, yet as healthy and vigorous as a young plant. It is not necessary, however, to enumerate, as all the best varieties are here in all sizes that can be wished for and vigorous.

The Orchids here are represented by a collection of plants which, as might be expected, are unsurpassable in quality, and embraces the choicest varieties, as well as the more popular kinds which are commonly grown in quantity. Ada aurantiaca is in bloom, and the high-coloured flowers are very telling. Aërides Schrœderi is noticeable, and a splendid plant of A. Fieldingi throwing-up several spikes is prospectively grand. A. Veitchianum is also attractive. Cymbidium eburneum displays its wax-like flowers; and Lælia Turneri is exceedingly rich. The Cypripediums contain beautiful plants of which C. Lowii, C. villosum, C. barbatum, and C. Roezli are flowering. Dendrobiums in bloom are represented by D. infundibulum, D. macrophyllum, the lovely D. lituiflorum, and D. Wardiannm. Masdevallia Lindeni is strikingly effective, its rich and distinct colour rendering it very conspicuous. Amongst the Odontoglossums in bloom are O. cordatum, O. luteo-purpureum, O. Uro-Skinneri (fine spike). Amongst Oncidiums are the almost ever-blooming O. cucullatum, and the pretty little O. anomalum. Phalænopsis Schilleriana is charming as usual, and Zygopetalum crinitum and Saccolabium præmorsum giganteum arrest attention. Calanthe Turneri has nice spikes of flowers, and ought to be more generally cultivated, as it is alike beautiful for cutting and for mixing with Ferns and fine-foliaged plants. The stock of Calanthes is very extensive, especially C. Veitchii; this and C. vestita luteo-oculata are two of the best varieties. They are now just showing signs of growth, and are being potted for next winter's blooming. These plants should be grown by all who have the means to grow them.

Palms and Cycads are a great feature in the establishment. A fine stock of that most elegant of all Palms Cocos Weddelliana is kept in a small state for table decorative purposes, and a number of plants of Geonoma gracilis are but little less elegant. Kentias, Verschaffeltias, and Martinezias are well represented in various stages of growth. Fine plants of Dioon edule and Phœnicophorium sechellarum are prominent, and there are striking examples of Cycas circinalis, Encephalartos Lehmanni and E. villosa.

Ferns are also grown largely in this nursery. The Filmy Ferns are in beautiful order. The Todeas, especially T. superba, are very fine, and Trichomanes, Hymenophyllums, &c., are growing luxuriantly. We noticed some very fine plants of Gleichenias, especially G. Mendeli and G. semivestita. A new greenhouse Fern Polystichum Lepidocalon is being raised in quantity in anticipation of a brisk demand.

Amongst the Tree Ferns are some extraordinary specimens high enough almost for a chief to ride under on his elephant, and sufficiently spreading to afford shelter on a grand palaver day to a retinue of dusky followers. The most striking are Alsophila Leichardtiana and the handsome Cyatheas—C. Burkei and C. Dregei. We noticed amongst these the very distinct Lomaria cycadoides.

We expected to find here a fine stock of the new Maidenhair Adiantum gracillimum, and we found it. This might well be styled the Gauze Fern, so exceedingly delicate is its structure, and so clearly can a bouquet of flowers be seen through its network of fronds. The popular A. Farleyense was "becoming scarce" in the Nursery, so said the guide; but he did not define what he means by plenty; his "scarce," however, is half a houseful of plants in all sizes.

In passing through the stoves we found a grand plant

of Anthurium Scherzerianum, and a host of the same valuable variety in small young stock. The newer white form of this is also opening its spathes, which bid fair to be larger in size than previously. Tillandsia Lindeni major is extremely beautiful, and the stock of this lovely flower is being increased rapidly. Abutilon Selowianum marmoratum is very fine, and Ficus Parcelli is particularly clear in its markings. Pandanuses are numerous and in first-rate form, and Dracænas are represented in splendid condition and in fine variety. Phyllotænium Lindeni is very attractive, and a nice stock is being raised of Anthericum variegatum. This is a new plant not yet, we believe, sent out, and is admirably adapted for table decorative purposes. It is a Pandanus-like plant, yet with soft gracefully-arched green foliage clearly striped with white. It is evidently of quick and easy growth, and is likely to become popular. Amongst the collection we noted a good stock of Sarracenias, and the best of the Platyceriums were growing freely.

But we must stop to conclude somewhere, and it may well be in the house first entered—the entrance conservatory.

Here the towering Ferns, the arched Palms, the rigid Aloes, and the stately Dracænas combine to each set off the charms of the other. The Cyatheas dealbata, Cunninghami, princeps, and Smithii are splendid specimens, with fine trunks and expansive heads, and the Dicksonias are equally large. A fine plant of the good greenhouse Palm, Sabal umbraculifera, is noticeable, and there is a good specimen of the hardy Palm Chamærops Fortunei. Dracæna lineata and Cordyline indivisa are worth attention, and a grand plant of Imatophyllum miniatum is throwing up its gay flowers.

In the packing-shed are immense Aloes and fine standard Bays in tubs for outdoor decoration in summer. Packing of plants was being proceeded with for exportation, something like twenty thousand being in course of transit from the nursery. Mr. Burton continues to superintend with his proved ability and uniform courtesy to all.

WHITE AND CLUSTER ROSES.

As the shows for the coming summer are now being arranged, I would, with all diffidence, put in a plea for white and cluster Roses.

It is very seldom one can find the former well represented at shows, owing, I presume, to exhibitors not caring to cripple their stands with the smaller blooms of the white kinds.

In schedules, for instance, where they have usually a class for twenty-four blooms of any one kind, might not that with advantage be substituted by one for the best twelve, or any other number of white Roses in distinct varieties? I think if such a class were introduced wherever possible it would prove an attraction, and also encourage what might well be fostered —the improvement of our white Roses.

Cluster Roses, again. Cannot something be done that Rose-lovers may see them at the shows? Many kinds are little known to most people; they are very lovely, and if exhibited in full cluster, would agreeably relieve the somewhat flat sameness of the present orthodox mode of showing separate blooms. —Cornubia.

P.S.—In my notes published on page 230, "Perfection de Lyon" should be "Perle de Lyon."

FLOWER MISSION AMONG THE SICK-POOR IN EAST LONDON.

Depôts are now opened at the Home of Industry, Commercial Street, Spitalfields, E., and Conference Hall, Mildmay Park, N., for the supply of the hospitals and missions nearest them. Flowers and fruits of all kinds would be most thankfully welcomed if sent addressed to the Secretary of the Flower Mission at either of the above depôts before 11 A.M. on Tuesday and Thursday mornings throughout the season.

The following extract from a letter of thanks for flowers will show how greatly they are needed and appreciated:—

"*From the Discharged Female Prisoners' Aid Society.*
"*Nine Elms House, Vauxhall.*

"When the Daffodils arrived they really made quite a sensation in the wash-house, that a kind lady thought of them in the Isle of Wight! Then the beauty of the flowers! Every woman and girl got a bunch. We have about twenty-six girls in our school here, and they were so pleased to have them to lend for the Sunday evening mission service, to put on the table to show to and please our other congregation of waifs that comes in then. It was really very touching; and a week later when I was at the class the remains of some were carefully treasured and put before me. So think of us occasionally again. I visit in the cancer ward at the —— Hospital occasionally. What a boon your flowers would be there! At present they have a few artificial ones—very pretty to look at—on the table, but that is all. The air of the ward would be all the better for them, for though the ward is very clean and neat, the disease necessarily causes malaria."

THE NEW HORTICULTURAL CLUB.

As Secretary of the new Club I write to state that the difficulties which existed as to obtaining suitable accommodation have been, I hope, removed, and that our Committee have every prospect of, within the next fortnight, concluding an arrangement for a place in every way desirable, situated within three minutes' walk of Charing Cross, and overlooking the Thames Embankment. It will comprise reading room, drawing, dining, smoking and billiard rooms, and all the adjuncts of a west-end club, and on terms exceedingly favourable, involving no risk or responsibility. It is earnestly hoped that it will afford a *point d'appui* for all who are interested in the pursuit we love so well. It will, we trust, be especially valuable to our country members, for whose accommodation a number of bedrooms will be provided. The subscription will be two guineas, with two guineas entrance fee.—H. Honeywood Dombrain, *Sec.*

THE BANANA.

There are several varieties of this fruit cultivated in the Island of Jamaica. Of these the Martinique, as named there, but called here the Jamaica, is considered the best, as being hardier in growth, easier to cultivate, not easily blown or broken down, and the nicest for eating. They bear in one year after planting. The bunches are very large. We have seen some that a man could not lift. The fruit is long, and is of a rich yellow colour. They are often brought here from Nassau. Once planted they require no care, but will continue growing, suckering-out, and bearing in the high woods. They will grow in any soil, but prefer gullies or damp places close to a river or spring. All other sorts of Bananas have been cast aside since these were introduced into the island.

Another long Banana called the Tiger, from the skin of the fruit being striped with black, is grown in some places, but the fruit is not considered so good.

The Otaheite is another of the same class of the long Bananas. The fruit must be very ripe before fit to eat. The flesh is of a rich strawberry colour. They are seldom grown, as they root-up very easily and cannot bear the weight of the bunch. They are not a profitable kind to grow.

Of short Bananas, first is the Dwarf or Chinese, not growing more than 4 or 5 feet high, with a strong stout body. They bear large bunches of fruit hanging nearly to the ground, and stand firm, but the fruit is of no account, and is usually used as a vegetable, the same as a Plantain.

Second, the Redskin. This is a strong-growing plant, bearing large bunches of handsome-looking fruit, and is most saleable in this country, but not considered equal to the Martinique in Jamaica.

Third, the Apple. This is not a profitable Banana to grow. The bunches are medium size, and the fruit about the length of a person's finger and very delicious, but the stalks root-up easily, and they require more cultivating.

Fourth, the triangular Banana, usually grown here, is the meanest of all the Bananas. The bunches are of medium size, but the fruit is not a nice one, being too slimy. They should be baked before eating.

There are some other varieties grown, but those we have mentioned are the only kinds that are commonly met with in the West Indies.

Every negro hut has Bananas growing around it. They are manured with ashes from the kitchen. As the bunches are fit they are cut off and taken into the house to ripen, for Bananas that ripen on the stalks are not near so nice, as they contain a strong alkaline juice, which exudes from the stalk when cut off. The fruit should be allowed to fill out and be fully grown; the bunch is then cut off and hung upside down to ripen in the house. The green fruit can be used as a vegetable by peeling off the skin, washed and boiled, and mashed up with butter and lard, and pepper sprinkled over it. A favourite way in the West Indies is to boil them with salt beef or pork,

and mashed up with some of the fat skimmed off the water. When ripe the fruit can be made into pies, same as Apple pies, or a pudding, by peeling them; then place in a dish and pour butter and sugar that has been rubbed together over them, and bake. They are very delicious done in this manner. Many inquiries have been made to us about protecting the plants from frost. We do not think that any Bananas will stand the frost and cold; the leaves are so thin that they are susceptible to any extreme, but some of the species may do better than others here. In the West Indies when the stalk comes up spindling and weak it is cut off just below the leaves; this does not kill it, but has a beneficial effect in making it thicken out and become stronger. We think that if this plan was adopted with those that had been affected by frost it might have the same tendency; but it should not be done until the cold weather has entirely passed away and the plants show an inclination to grow. As the bunches are cut the stalk should be cut down to within a foot of the ground, cut into pieces and placed around the roots; the same with the leaves. This is returning to the land a part of what has been taken away. The juice of the stalk is good for clarifying sugar. The young leaves of the spire are used for dressing blisters; very cooling and soothing when placed on after the blister is clipped.

We would not advise flooding the roots in the winter, for the frost is seldom severe enough to injure them; it is the leaf that suffers. When plants with young fruit are caught by the frost before coming to perfection we think it is the best plan to cut down the whole stalk at once and chop it up, covering the roots with it. This will enable the plants that are standing to receive the full nourishment on return of spring, instead of wasting its strength on a part that will never come to any good. In the West Indies if the Banana plant is highly manured, the stalk, or body as it is called there, will grow very large and succulent, but at the expense of the fruit, the bunches being small. Ashes have been found to be the best manure that can be given, with an occasional sprinkling of salt.—(*California Horticulturist.*)

NOTES AND GLEANINGS.

Mr. W. A. Lindsay, Secretary of the Royal Horticultural Society, has represented to the Governor of the Fiji Islands the desirability of obtaining their Plants new to horticulturists. The Governor, Sir A H. Gordon, has courteously responded to the representation.

—— We find the following paragraph in the *Bruce Herald* (New Zealand) of January 5th:—"A new species of a vegetable-devouring pest has lately been observed in Napier for the first time. It is a very small black-red insect, like a beetle, and can be seen on the hills in swarms. Through whatever paddock or garden these insects travel they leave nothing green behind them. From the country, also, we learn that grasshoppers are in myriads."

—— A scheme, we understand, is in contemplation for the formation of Manley Hall, Manchester, with its conservatories and grounds, into a Winter Garden, on a scale of magnitude and completeness hitherto unattempted in this country. Manley Hall and grounds comprise an area of eighty acres.

—— The Linnean Society, like many another great institution, had its origin in an accident. The late Sir John E. Smith, then a medical student, was breakfasting one day with Sir Joseph Banks, when the latter told him that he just had an offer of the memoranda and botanical collections of the great Linnæus for £1000, but that he had declined to buy them. Young Smith, whose zeal for botany was great, begged his father to advance to him the money, and at length persuaded him to do so, though not without difficulty. It may appear strange that Sweden should consent to part with the treasures of her far-famed naturalist; and indeed the king, Gustavus III., who had been absent in France, was much displeased on his return at hearing that a vessel had just sailed for England with these collections. He immediately dispatched a vessel to the Sound to intercept it, but was too late. The herbarium books, MSS., &c., arrived safely in London in 1784, packed in twenty-six cases, and cost the purchaser £1088 5*s*. In the following year Smith was elected a Fellow of the Royal Society, and devoted himself more to botanical studies than to his profession as a physician. In 1792 he had the honour of being engaged to teach botany to Queen Charlotte and the princesses, and he was knighted by the Prince Regent in 1814. At his death in 1828 the celebrated collection, with Sir J. E. Smith's additions, was purchased by the Linnean Society.—(*Cassell's Old and New London.*)

—— On the 23rd ult. the freehold estate well known as Meredith's Vineyard was offered for sale by public auction by Messrs. Protheroe & Morris, auctioneers, London. The estate comprises upwards of six acres of land applicable to Vine-growing, or for the purposes of building land. There was a fair attendance, and amongst those present were several of the leading horticulturists and florists connected with the district, and others from a distance. In opening the sale the auctioneer stated that he had gone carefully over the estate and made an estimate of its value as a going concern, which he considered should be about £21,000. He then went into particulars as regarded the breaking-up of the estate, and stated that the freehold land might be put down at £6500; 50,000 feet of glass at £3125; dwelling house, £1400; three miles of hot-water pipes, £792; boilers, £100; brickwork, &c., £300; stonework, sheds, tables, &c., £250; making a total of £12,500. The bidding then proceeded, the first offer being £7500. This amount was increased by £50 upon each offer up to £8650, when the bidding rose to £9000. The advances then proceeded by gradations of £50 until the amount reached £10,000, at which sum the estate was knocked down to Mr. John Cowan of London. The Cowan Patents Company, propose not only to make use of the property as an exhibition of their patent apparatus, where it can be seen in full working order, but will use their best endeavours to maintain its well-earned fame, and, if possible, increase its reputation. It was stated by the auctioneer that there were certain plants, &c., which, in accordance with the conditions of sale, did not go with the estate; and if not taken by the purchaser at a valuation they would be sold by auction at a future day.

INCREASED POWER IN PLANTS TO RESIST COLD.

At a meeting on February 9th Mr. Thomas Meehan referred to a tuber of Solanum Fendleri, exhibited by him some months ago, and which had taken a departure towards those of the common Potato. He had offered some suggestions in relation to the possibility of a common origin of these two species, but among the improbabilities he had classed the power of resisting cold, as, while the common Potato was easily destroyed by frost, Fendler's Potato endured without injury a temperature of zero. He had been under the impression that whatever changes plants might experience in the course of ages, the adaptation to special temperatures was nearly if not quite unchangeable. A recent experience, however, suggested the possibility of more change than he had supposed. During the very low temperature, with the high wind, of a week ago, the frost to the extent of 2° or so, and for a short time, got into a greenhouse with blooming plants, some of which were injured by it. Among these were Calla æthiopica, Browallia elata, Bouvardias, Begonias, and some others. The light frost, in the case of all but the first-named, destroyed the leaves, but left the flowers uninjured. The flowers in their several parts are but metamorphosed leaves, and thus we see that with the morphological advance of the leaf to a petal came an increased physiological power to resist cold. In the case of the Calla the flowers as well as the leaves were destroyed, illustrating the same law, as the spathe of this flower is but a leaf very slightly differentiated, and consequently more subject to the laws regulating leaf life. There was nothing quite new in these observations, as all must remember that when the first light frost killed the Dahlias, Chrysanthemums, and other tender plants, the petals would often remain uninjured after the leaves had been blackened by frost; and also the fact that when the leaves of plants become still more highly metamorphosed and become seeds, those of the tenderest plants would often endure considerable cold. Thus the seeds of the common Convolvulus or Morning Glory, and of the Balsam, or Lady's Slipper, as it is called in American gardens, would live out in the earth with us and grow in the spring, though the plants would be killed by a single degree of frost.—(*American Monthly.*)

Auriculas Growing Tall.—I know Mr. Tymons to be a thoroughly practical and enthusiastic Auricula grower, but I must only repeat that if the stem is cut off where there are no rootlets I do not see the least chance of its rooting. I have never—(but then it may be my bungling)—been able to root

even an offset which had not a tiny root attached to it. It may be very small, but that is sufficient; but if it have none it has ever been with me an ineffectual attempt.—D., *Deal.*

PASSIFLORA EDULIS.

This is an interesting species of an extensive and beautiful family of climbing plants. Most of them require a stove temperature to bring them to perfection, although P. cærulea and its varieties will flourish on a south wall in the open air in the southern counties. But P. edulis while being a native of India will still succeed in a lower temperature than many of its allies—that is, it will cover a roof and flower freely in a warm conservatory, yet to perfect its fruit it requires, and is worthy of, stove temperature. Its flowers are not nearly so beautiful

Fig. 61.—Passiflora edulis.

as those of some other varieties, but its handsome plum-like fruit, which are so easily and freely produced, add an interest to the plant to which its more gay compeers can have no claim. The fruit, besides being decidedly ornamental, has a flavour which is particularly agreeable to some palates; and where such is the case, and means are provided, it is specially grown for dessert purposes. In the gardens of Drumlanrig Castle a house is solely devoted to the culture of this fruit, and large crops are produced. The fruit has a pleasant aroma, is cooling, and has a refreshing subacid taste, and is particularly adapted for allaying thirst in the tropical countries to which it is indigenous.

As an ornamental roof-covering plant it is to be feared that P. edulis has frequently given place to less worthy objects. It is not easy to find a plant more beautiful than this with its elegant pendant shoots laden with flowers and fruit, which hang with an airy gracefulness from the roof of a suitable glass structure; the plant is, moreover, of very easy culture. It should be raised from cuttings in preference to seed. Seedling plants grow freely enough, and soon cover a large space, but they are sparse in blooming compared with plants which have been struck from cuttings. Short-jointed young shoots strike quite easily any time during the summer if put in sand under a bell glass, and attended to by the requisite amount of heat, shade, and moisture.

A suitable compost for established plants is turfy loam two-thirds, the remainder leaf mould, peat, and old decayed cow dung, this to be liberally mixed with sand and broken charcoal. Although the plants require an abundant supply of water during the summer season, any approach to stagnancy is pernicious, and consequently the drainage must be very complete. It is well, too, in potting to place some crocks or rubble round the neck of the plant, as it is apt to canker and decay at the surface of the soil; but to grow it well it should be planted out. Corners of bark pits, walled-off from the bottom, form fitting receptacles in which to plant. In these, with due attention, plants will flourish for many years. In the summer season a free use of the syringe is necessary, as a dry atmosphere, and especially if dry at the root, if only occasionally, at the same time, will certainly invite a crop of red spider. Syringing must be less frequent pending the setting of the fruit, which is aided by each bloom being artificially fertilised with its own pollen. On this point the same treatment that is given to Vines is applicable.

In the winter the roots must be kept somewhat dry, yet even then the soil must always be perceptibly moist. A minimum winter temperature of 45° is safe, and a plant has been preserved for some years at a lower temperature than this, but it is not advisable.

In training, a vital point is to guard against overcrowding. If the young shoots are suffered to cling together and become interlaced, the plant will lose vigour and only produce useless spray. The aim should be to have the young growth thinly disposed, so that each shoot can have the benefit of light and air and become matured. It is only by this means that fruit can be expected. Spring is the best time for pruning, just when the plant is commencing to grow. The shoots can then be thinned-out and shortened, so as to cover the space required. Taking out old wood by degrees and laying-in young is the necessary mode of prolonging the vigour of the plant, and to preserve it in a flowering and fruiting state for many years.

Besides P. edulis, the fruit of P. quadrangularia is eatable. This variety perfects a larger fruit, and has a more beautiful flower than the foregoing. It is also more robust in habit and requires a higher temperature. It is one of the most handsome of the entire genus, and is worthy of being cultivated where a suitable position is at command. The following is Lady Dorothy Nevill's receipt for the preparation of Passiflora jelly:—

Peel and cut the fruit before it becomes over-ripe, cover with spring water and allow the fruit to boil till quite tender. Then strain through a jelly-bag, measure the juice, and to one pint of juice put half a pound of loaf sugar, the rind of four Lemons and the juice of six, then boil very quickly till stiff enough to turn out of the mould. A pot of this jelly made from P. quadrangularis was some years ago submitted to the Fruit Committee of the Royal Horticultural Society and was highly approved of.

HARLAXTON.

Harlaxton is situated about three miles from Grantham, and its manor house may unquestionably be classed amongst the finest of English mansions. Its erection may be regarded as the life-work of the late Gregory Williams Gregory, Esq., who died in 1854, just as his great work was completed. For a period of twenty years £10,000 to £15,000 annually were expended on the fabric and its surroundings, and in order to secure perfectness of detail Mr. Gregory made periodical visits to the Continent to note and subsequently carry into execution the most elaborate examples of architectural ornamentation he could find, and which he could adapt to his magnificent mansion, for that is a term that may justly be applied to this sumptuous pile. Its interior arrangements had the same lavish care bestowed on them, and everything that could be collected in rich and rare furniture and works of art was arranged with consummate taste.

On its completion Harlaxton was regarded as one of the wonders of the time, and an hotel had to be erected for the accommodation of the numerous visitors who came from all parts to see it. Its tapestries were rich, its furniture superb, and statuary inside and in the grounds extensive and costly. So great was its fame that Her Majesty honoured it with a visit of inspection, and there was a general feeling of surmise that it was destined for a Royal residence. This was not to be; but instead, its riches were to be scattered, as the then owner had strangely devised the furniture and works of art to

one, and the mansion and estates to another. The phrase attributed to Marshal Blucher in reference to London, "What a place to sack!" might at that time be applicable to Harlaxton. It became a matter of contention as to what was legitimately to be considered as furniture, and expensive litigation was the result. In the end, however, its treasures were removed, but the present owner, Mrs. Gregory, has laboured to restore, refurnish, and redecorate; and Harlaxton, if a kingly mansion once, is a princely residence now. But the statuary of the grounds cannot be replaced, and only a fine marble bust of Mr. Gregory remains in the gardens.

The conservatory adjoining the mansion is an elaborately finished structure, the stone dressings being especially ornate, and full of costly and superior workmanship. The edifice is in five compartments, the interior dressings being of marble. It is heated so that some portions are devoted to tropical plants planted out and some as cool conservatories. It is filled with good plants in an excellent state of health, and by Mr. Vinden's care is alike interesting and attractive.

The mansion being erected on the side of a steep declivity, and well backed by woods, afforded a fine scope for landscape treatment, and full justice has been done in making the grounds ornamental. They are laid out in broad bold terraces and massive Yew hedge boundaries rising, as it were, mountain-like tier beyond tier, and are reached by broad walks and fine flights of steps. Now we are on a level with rich flower beds and looking down on highly-coloured panels spread out several feet below. The several stone staircases, as they may be called, and balustrades which abound in the grounds are a study for the architect. They are extraordinarily massive, yet exhibit a delicacy of treatment such as can only be seen in miniature in fine art exhibitions.

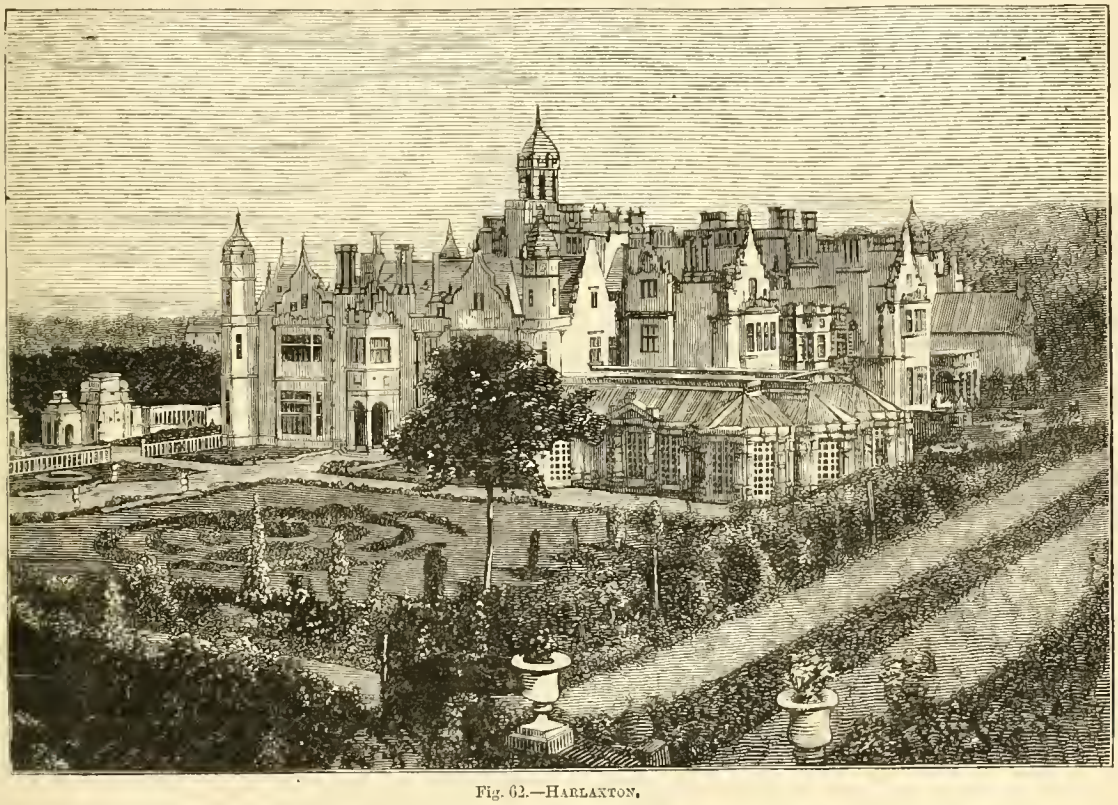


Fig. 62.—Harlaxton.

The Yew hedges mentioned are a fine feature of the place, and so are the isolated pillars of this evergreen, which are interspersed with vases in different parts of the grounds. As a groundwork Berberis (Mahonia) is extensively used, out of which columns of Irish Yews tower sombre and stately, yet toned by the associated stonework.

The flower beds are skilfully managed, and last year, although in one of the driest spots of Britain, they were filled with the best varieties of bedding plants, and (it could only be by unremitting care and labour) presented a mass of beauty quite worthy of this establishment.

The view from the terraces is exceedingly fine, being an almost unbroken panorama of trees, out of which the spires of distant village churches emerge, and bounded by the sweeping woods of Denton and Belvoir.

The kitchen gardens are about half a mile from the mansion, and are unlike any others to be found in Britain. The walls alone cost £10,000, and are extraordinary examples of masonry. They are built of brick with very substantial copings and elaborate stone dressings, and have niches at intervals which had been intended for statuary. The walks are paved with bricks, and are flanked by flower borders bordered by marginal lines of the beautiful blue Gentian. The main walks converge to the point of entrance, and the visitor is almost startled by the extreme novelty of this garden, its walks and walls, when taking his first view. That the effect may be seen in the drive-past on the main carriage way iron latticework openings are made in the boundary wall, and none can pass without an admiring glance.

The walls are well clothed with fruit trees, especially Pears, which are admirably managed. Worthy of especial note also are two Morello Cherry trees, the finest trees and bearing the finest fruit we ever saw. They are not pruned after the ordinary manner of laying-in young wood, but are closely pinched and spurred, and the crops and quality are quite extraordinary. The glass structures are devoted to Grape, Peach, and Cucumber culture, in which Mr. Vinden excels. He is also equally at home as a grower of plants, of which many are required for the mansion; he is also successful as an exhibitor.

We have only given an outline of this exceedingly fine and well-managed place, but have a hope of being enabled to fill-in the details on a future opportunity.

PEARS—WINTER NELIS.

I wish to draw attention to another old Pear, Winter Nelis, which my experience leads me to place at the very top of the list.

It possesses every quality which the most fastidious Pear critic could desire. It is a sure cropper, the fruit is fine, on

well-established trees considerably over middle size, of the most delicious flavour and texture, second only, if second, in these respects to the very best Marie Louise. Then it remains in season longer than any Pear I know of.

I have had it in use from the end of November to the present time, and I have still a few left which look as if they would keep till next month. Another great point in its favour is, that it never decays at the core, it begins to go always from the outside.

It deserves a wall and should have one if possible; but I have it as a pyramid and the fruit is very good, hardly distinguishable, save in size, from that grown against a wall. But the pyramid is rather delicate and apparently liable to canker. My opinion of this Pear is so high that were I doomed to grow only one sort, it would certainly be Winter Nelis.

Easter Beurré, the crack winter Pear of the French, is worthless here. Whether from a wall or from trees in the open, it is by far the worst Pear that we grow in these parts.

My experience of Knight's Monarch is the same as that of your late correspondent's. The fruit refuses to ripen. Glou Morçeau, though it does fairly well in neighbouring gardens, is worthless with me, though a noble-looking Pear. I have given it a good trial on a south wall.

I am trying a good many other kinds, but cannot as yet give an opinion as to their merits.—L., *Cheshire.*

NOTES ON VILLA AND SUBURBAN GARDENING.

Continuing my remarks from last week upon the work to be now done in the kitchen garden, I advise that a crop of

Turnips be now sown; and although much cannot be expected from this crop, because, being early, there will be a probability of a portion of them running to seed, nevertheless, a few dishes of young early Turnips are worth trying for. The Early Stone and Early White Dutch are trustworthy sorts to sow both for the first and second crops. Sow in drills rather than broadcast, which gives a better opportunity to clean the ground.

Celery.—Of this most people grow some. Sow the seed in the following manner:—Make-up a small bed of prepared soil, and place a frame or two or three hand-lights upon it, and keep the sorts separate. Cover the seeds thinly, and gently water them, and not once allow them to become dry afterwards. This is very injurious to all small seeds, because when once the seed has begun to germinate, if allowed to suffer from the want of moisture its vitality is destroyed.

There are now too many sorts of Celery before the public, and in my opinion very little difference exists between them. There are tall and dwarf reds, and tall and dwarf whites, in many so-called varieties. I am satisfied with growing the following:—Williams's Matchless Red (tall) and Ivery's Red (dwarf), Cole's Crystal White (tall) and Sandringham or Tom Thumb (dwarf). After the plants are up and can be handled conveniently they may be pricked out in rows on a border of rich soil or manure, and grow there until wanted to plant in the trenches.

In small gardens, where space is an object, it is best to dig out the trenches at this time of the year, and fill them with manure pressed down and covered with soil. The space between the trenches can be cropped with Peas or Beans, or any vegetables which will come off before the soil is wanted for earthing-up; and again, if the trenches are dug 18 inches wide there will be room for two rows of Celery in each, thus by that plan space will be made the most of.

Parsley.—That which has stood the winter will now be starting into growth freely, but this soon runs to seed; therefore make a full sowing at once, either in drills by the sides of the walks or in a bed or border by itself. It is a crop which takes some time to come into use from seed, therefore it should be pushed on with all haste to succeed the winter crop. There are many good sorts of curled Parsley; Myatt's Garnishing seems to be about the best. The plants must be thinned-out in time and be highly cultivated to produce fine foliage.

Herbs.—If these are required in any quantity it is advisable to make plantations of them by deeply digging the soil and divide the ground into narrow beds according to the number of sorts to be sown; it is always best to have them all together. The seed may be sown and the plants allowed to establish themselves after being properly thinned-out. The sorts I allude to are Sweet Marjoram, Sorrel, Savory, Sage, Borage, Burnet, Thyme, Fennel, and Chervil, all hardy sorts; next comes Basil, which from being rather tender should be sown under cover and afterwards planted out.

Many of the sorts may be raised from cuttings put in under hand-lights, and be afterwards transplanted. These are Sage, Tarragon, Thyme, and Savory; while others may be propagated by division, such as Mint, Tarragon, Tansy, Pennyroyal, and Camomile.

Asparagus.—Where it is necessary to make new beds this should be done at once; and if they are likely to be permanent considerable pains should be taken in their formation. Asparagus likes a deep rich soil and plenty of moisture, yet the site must be well drained, therefore the soil should have plenty of manure trenched-in deeply and be well worked-up; if the soil is stiff add roadside sand to it.

There are two ways of planting. One is to strike out the beds 4 feet wide, with alleys 2 feet wide or more between each, and the plants put in rows; but another plan, and a good one, is to plant in single rows about 4 feet apart, and the plants 1 foot in the rows. They grow remarkably strong this way, and the shoots therefore come up large for cutting.

Old beds that have been covered up during winter should now have their spring dressing. Take off the soil down to the coating of manure, then dig that in carefully so as not to injure the crowns. Let the soil remain for a few days to dry, then rake it down and leave it even on the surface. Keep the beds very free from weeds during summer.

Globe Artichokes.—Like Asparagus, these must have a good, rich, and deeply-cultivated soil to grow in, and now is the best time to make a plantation. Plant in rows 3 feet apart, and the same from plant to plant. Rooted suckers should be taken from the old plants. They must be taken off very carefully, and after planting be well watered until they become established. A plantation will last seven or eight years. They produce their heads in June and July; but if they are wanted longer a few should be planted every spring, which will produce heads towards autumn.

Cabbages.—Fill-up the winter bed with plants from the seed bed, and afterwards earth-up the rows, as they are now beginning to grow; but before this the ground should have been pointed-up with a fork.

Tomatoes should be sown in mild heat and be grown to a good size for planting out in May. The same may be said of Capsicums, which ought to be planted in May in the warmest part of the garden.

Salsafy and Scorzonera need not be sown till the middle of April, or the plants will run to seed; and the sowing of Beetroot should also be deferred to the same time for the same reason.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

KITCHEN GARDEN.

Allusion was made two weeks ago to the drying winds experienced this spring, and a continuance of them has allowed us to push forward operations without interruption; indeed, cultivators would be glad of a shower to moisten the ground which is being prepared for Potatoes.

We have just planted-out the Potatoes for earliest crop on a warm border. The sets had been placed in boxes, and not covered with cocoa-nut fibre refuse, so that young roots had been formed, and as the house was airy the eyes started strongly. Care was taken in planting them not to injure any of the young sprouts. The ground, which had been dug and manured in the winter, was forked lightly over, planting the Potatoes with a line as the work progressed. The sorts are Myatt's Early Ashleaf, Veitch's Improved Ashleaf, and Extra Early Vermont. This last is said to be so similar to Early Rose as not to be distinguished from it. It was very promising last year, having produced a very large crop with a disproportionately dwarf haulm. The Kidneys were planted 2 feet apart, and the American variety 18 inches only between the rows.

Made another sowing of Peas, dwarf sorts, such as Carter's Premium Gem, not requiring any sticks, and varieties requiring sticks—viz., Dr. Hogg, Fillbasket, and G. F. Wilson. Fillbasket is an excellent cropping sort, and will be the standard for all who prefer quantity to quality. G. F. Wilson is an early form of Veitch's Perfection, being ready for gathering quite a week before that excellent dwarf marrow sort, and in other respects it is equal to it. The dwarf Peas are being rapidly improved. Premium Gem is a decided advance on Little Gem, and Blue Peter is an excellent cropper; also, Mr. Laxton has Unique, which he says is 1½ feet high. They are sown half the distance apart that the other sorts are, and being put in the same time their relative cropping qualities will be determined.

If the Asparagus beds are not forked over they ought to be done at once. The usual way is to mark off the alleys between the beds, just forking very lightly between the rows, and adding to the surface of the beds any mould required from the alleys.

Sow Celery for the latest crops in an open place. In the northern districts Beet, Scorzonera, and Salsafy may be sown at once; but the middle or end of April is a better time in warmer latitudes. We are (in Essex) two or three weeks earlier with all crops that require a season to mature, if they are sown

at the same time, than in the south of Scotland or northern districts of England.

A second sowing of Broad Beans should now be made. If Brussels Sprouts, Savoys, and Broccoli for the earliest crops are not already sown they ought to be put in at once.

FRUIT AND FORCING HOUSES.

Pineries.—A high degree of temperature can be kept up in the fruiting house now if it is necessary to push on the fruits that are swelling, with a minimum of 70°, rising to 90° with sun heat; but the quality of the fruit is deteriorated by a high temperature, as it necessitates the house being kept pretty close, much artificial heat in cold nights, and proportionately more atmospheric moisture. Under such circumstances the crowns are frequently drawn-up out of proportion to the fruit. Should a day or two of bright sunshine occur after a dull period, it it as well to shade any fruits swelling-off with a sheet of paper during the hottest part of the day, say from ten to two in the afternoon. The fruit should also be tied to sticks to prevent it from falling over, for unless the fruit is quite upright the crowns will be one-sided.

ORCHARD HOUSE.

The Peach and Nectarine trees will not be in flower for a few weeks yet; the house has been well aired, and no artificial heat has been required at night, so that the lateness of the bloom will in all probability be the means of a good set. Plums and Pears have only been taken-in this week; however, a week or two of fine weather would cause all blossoms to open rapidly.

A little care is necessary in watering the trees, and there is more danger of the flowers dropping through the roots becoming too dry than if too much water should be applied. Thorough drainage is of the utmost importance, and there is but little danger to be feared from superfluous water when it drains away freely. Should the trees not be quite free from brown scale, now is the best time to look over them and have the scale removed, afterwards washing the place with strong soapy water.

Strawberry plants on the shelves do not as yet make much growth; the pots are watered alternately with weak liquid manure. They ought also to be watered with care, as the 6-inch pots are crammed quite full of roots; there is not much danger of overwatering any of them unless the drainage has become choked through worms working. When this is the case it is best to turn the plant out, and after clearing the crocks from mould carefully replace the plant as before. Worms may be destroyed by watering with clear lime water. Remove succession batches of plants to the forcing house as they are required. Any variety will bear rapid forcing now. President and British Queen are the best for late crops.

PLANT STOVE.

Climbing plants are growing freely, and if neglected now will be materially injured for the ensuing season. Those trained to the roof should not be allowed to twine into each other, nor should the young growths on the same plant be allowed to do this. Those growths that coil round the wires must also be untwined in order to train the plants as they ought to be done. Stephanotis, Ipomæa, Hoya carnosa, and all rapid-growing creepers should be looked over once a-week.

Pot plants of the same climbers should be trained in the same manner. The flowering growths must not now be trained round the trellis but to string, one end of which is attached to the trellis and the other to the roof of the house; this allows the leaves and flowers ample space to develope themselves, and when the flowers begin to open, the growths may then be tied into their proper places. The splendid plants of Stephanotis floribunda and other stove climbers exhibited at the metropolitan exhibitions are obtained in this way.

Not a single mealy bug should be allowed in the house. We can only recommend hunting them up with soft soap and water. It is mere waste of time and money to fancy that this pest can be destroyed by merely syringing the plants infested with any decoction.

Thrips are also very troublesome in the stove. Tobacco smoke will destroy them if it can be applied strong enough, but the leaves of many stove plants are very tender, and the young fronds of Ferns will not stand smoke. The best treatment is to wash the insects off with a sponge and soapy water. Red spider is kept in check by syringing the plants; those that cannot be syringed must be washed off by hand.

FLOWER GARDEN.

We have run the mower over the lawn and cut the grass edgings. It is now time that all the pleasure grounds should be in first-rate order, as a badly-kept lawn spoils the best place.

If any shrubbery borders have not yet been forked over it ought to be done at once. It may not be desirable to fork or dig where choice herbaceous plants are, but the Dutch hoe at least should be run through the ground, making the surface neat with a small rake. Rhododendron beds should be hoed and raked, and a dressing of rotted manure be placed over the surface. This practice is especially needful in dry districts, as it not only nourishes the plants but retains moisture. Hoed beds of spring-flowering plants, and also stirred the surface of Pink beds for the second time.

Auriculas are now throwing up their flower trusses, and it is desirable to shelter them from the east wind; in fine days the lights may be removed for a few hours in the middle of the day. Do not allow the plants to be exposed to rain; a slight shower would not injure the Alpine section, but the more tender florist varieties are much better under shelter.

Carnations and Picotees will be potted into the flowering pots as soon as we can attend to them. In the meantime the plants have been looked over, the withered leaves picked off, and a few plants that were attacked by aphis dusted with Scotch snuff.

Planted-out the first batch of Gladiolus bulbs. We have planted as early as the first week in March and once in February, but it is not desirable to do so, as the plants grow through the ground too early, and though they may not be cut down by spring frosts they are sometimes injured. To have a continuous display of this fine autumn flower until the end of October a succession of bulbs must be planted every fortnight until June. Do not neglect to place a little sand under and over the bulbs, nor should they be planted too deep; 2 inches of mould over the top of the crowns is quite deep enough for the largest bulbs. Small bulbs should not be quite so deep in the ground.—J. Douglas.

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Jersey.—May 5th, Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.

Bath.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.

Crystal Palace Company.—Flower Show, May 22nd; Rose Show, June 19th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.

Coventry.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.

Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.

Burton-upon-Trent.—June 16th. Mr. Wm. Shave, Bond Street, Sec.

Glasgow.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.

Fareham.—June 23rd. Mr. H Smith, Sec.

Exeter (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.

Wisbeach.—June 30th. Mr. C. Parker, Hon. Sec.

Maidstone.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.

Spalding.—July 1st and 2nd. Mr. G. F. Barrell, Hon. Sec.

Durham and Northumberland.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.

Nottingham.—Rose Show, &c., July 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.

Tonbridge.—July 14th. Mr. W. Blair, Free Press Office, Hon. Sec.

Wimbledon.—July 15th and 16th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon. Sec.

Darlington.—July 16th, at Southend. William Hodgson, Sec.

Brecon.—July 22nd. Mr. W. J. Roberts, Sec.

Cleckheaton.—July 24th. Mr. S. H. Williamson, Hon. Sec.

Preston.—July 28th and 29th. Mr. W. Troughton, 4, Church Street, Hon. Sec.

Southampton.—July 31st and August 2nd. Mr. C. S. Fuidge, 32, York Street, Lower Avenue, Sec.

Ramsgate.—August 25th. C. D. Smith, Esq., 8, Marine Terrace, Margate, Hon. Sec.

Dundee.—August 26th, 27th, and 28th. Mr. R. McKelvie, 51, Reform Street, Sec.

South of Scotland.—To be held at Dumfries, September 3rd. Mr. J. Blount Dinwiddie, 11, Buccleuch Street, Dumfries, Hon. Sec.

TRADE CATALOGUES RECEIVED.

Louis Van Houtte, Royal Nurseries, Ghent, Belgium.—*Catalogue of Gesneriaceous, Bulbous, and Tuberous-rooted Plants.*

Ch. Huber & Co., à Hyères (Var.-France).—*Priced List of Ornamental Plants.*

J. Linden, 52, Rue du Chaume, Ghent, Belgium.—*Illustrated General Plant Catalogue.*

John Saul, Washington City, D.C.—*Descriptive Catalogue of New and Rare Plants, and General List of Florists' Flowers.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three

questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

POTATOES (*C. B. G.*).—The Lapstones you enclosed are affected by what is called "the Potato disease," about which so much has been written but no remedy ascertained.

CANKERED FRUIT TREES (*Jane*).—In the case of aged trees there is no cure for chronic canker. When it occurs on young trees a thorough drsining of the soil and a thin trsining of the shoots in the growing season to secure wood-ripening, are vital points to be attended to.

GAS-HEATED BOILER.—A correspondent, "J. H.," wishes to know the dimensions of the gas-boiler mentioned by "J. W." on page 178, and whether he thinks it would be capable of heating 150 feet of 2-inch pipe, also the amount of heat he was able to maintain in his greenhouse during the severest of the recent weather.

PRIMULA SINENSIS METAMORPHOSIS (*R. R. W.*).—We never before saw such a total change of the flowers. All are green; the petals are like the calyx. Stamens and pistils are all green, and even the ovary is leafy and green. We do not think the sport will be permanent.

GARDEN ENGINES (*E. B.*).—Any one of those advertised in our columns does its work well.

MOWING MACHINE (*M. A.*).—Write to Messrs. Green and tell them your difficulty with the chain. They will give you the information you need.

BONE MANURES (*F. J.*).—All in the list are good manures. We believe No. 6 the most durable.

IRISES (*W. A., Coventry*).—Any of the florists who advertise in our columns could supply fifty varieties if you explain to them what you require.

POTATOES FOR SEED (*H. K.*).—In the neighbourhood of Liverpool and Manchester all the varieties you name are grown. Inquire of the dealers in Potatoes there.

VICTORIA SAVOY (*A Subscriber*).—This is merely a form of the Dwarf Green Curled, and may be only a good selection. It is the best Savoy for general crop.

CAULIFLOWERS (*Idem*).—Walcheren, Lenormand's, and Veitch's Autumn Giant.

BROCCOLI (*Idem*).—Snow's Superb Winter White, Perkins' Leamington, Carter's Champion.

GOOSEBERRIES (*Idem*).—Rough Red, Whitesmith, and Warrington.

PLANTS FOR SCREEN (*M. C.*).—Having a hedge which will in due time give you the desired seclusion we should not go to the expense of a permanent fence of wire with climbers to cover, but content ourselves with a summer screen or two of such subjects as Scarlet Runners, Sweet Peas, and Nasturtium, the two last giving very useful flowers for cutting, and the first is one of the most useful vegetables. We should have all three, a row of each as follows, commencing from the back:—Scarlet Runners, a double row sown early in May, sowing rather thickly 3 inches apart in the rows, and providing with a double row of stakes, the stakes a foot apart every way, and in quincunx order, and with 7 feet stakes there will be little seen through it when covered. A double row of Sweet Peas mixed, and containing about half Scarlet Invincible, being sown at once and furnished with stakes 6 feet high, completing with an inner row of Nasturtium Tall mixed, and furnished with stakes 6 inches apart 5 feet high. This will give you a complete block by attending to the growths, tying and training to the stakes as required.

SURFACE PLANT FOR FERNERY (*Idem*).—The "small pointed-leaved Ivy" would grow luxuriantly in a stove fernery, but better far is Ficus repens, a very close-growing and rapid evergreen. It clings to walls or stone remarkably well, in fact will cover speedily any surface.

GRAFTING MAGNOLIA (*T. V.*).—The proper time to graft is in April just when the plants commence swelling the buds, and the safest mode is by inarching, which will take a year if not two to effect a complete union, the union of Magnolia scions with the stock being notoriously slow. Budding may also be accomplished in July or August. Cover the ligature with grafting wax, which is more neat, and is not so liable to crack as the usual grafting pigment of clay and cow dung. The leaf you sent is one of the forms of *M. grandiflora*, we think exoniensis, but the leaf is too small to judge with certainty.

CUCUMBERS AND MELONS (*X. Y. Z.*).—The Box-like border will be better than pots, but the depth ought to be not less than 9 inches, as in a shallow soil the roots are subject to suffer from drought. We should not give them all the soil at once, but add to it as the plants advance in growth. The netting, which we presume is wire, we should have fixed at a foot distance from the glass, and train the Vines to it. Ordinary netting we fear would not answer, and wire is not more costly than netting. It should be painted. Telegraph is a good Cucumber; more prolific but smaller is Munro's Duke of Edinburgh; Blue Gown is larger and very free; Tender and True has a very fine fruit, and is free-bearing. Melons: Meredith's Hybrid Cashmere, Cox's Golden Gem, Duke of Edinburgh, and Read's Scarlet-flesh; but if you have only sun heat Munro's Little Heath.

ECHEVERIA PUMILA (*C. W.*).—Judging from the small offset you sent us, the preceding is its name. It is one of many succulents at present so extensively in use for flower gardens, and is very suitable for an edging to beds. It is easily grown in light turfy loam, with a fourth of well-rotted manure and a sixth of sand or old mortar rubbish broken up small, good drainage being necessary. Water in winter carefully, keeping only from shrivelling, and during growth water more. It is a greenhouse plant, and should have a light airy position.

THINNING GRAPES (*Idem*).—It is difficult to describe this operation, there is so much diversity in the shape and size of berries, in their setting, and form of bunch. The shoulders of the bunches should be tied-up, and the smallest berries ought first to be taken out, and leave the largest and best three-quarters of an inch apart for the small round and oval-berried kinds, and an inch for those which have large berries. The berries inside the bunch should be removed, leaving them as much exteriorly as possible, and with plenty of room to swell. The earlier they are thinned after setting the greater prospect is there of large berries; but it must not be practised until it is clear which berries are taking the lead (some are small, and will be always so from being seedless), and those that are certain to attain a full size.

SEAKALE—CUCUMBERS (*Idem*).—It is not proper to blanch Seakale the season of planting, but it should be allowed to make a good growth, and in the winter following it may be forced, or blanched by covering with pots, and then with litter, or it may be blanched by covering with ashes or any light material. Liquid manure for Cucumbers may be made by a pack of sheep droppings to thirty gallons of water, and the same quantity of cow dung, horse droppings, and soot to twenty gallons, or 1 lb. of guano to the latter quantity of water.

CYCLAMEN PERSICUM PLANTING OUTDOORS IN SUMMER (*G. S.*).—We do not recollect in what number the planting-out of these plants is recommended. After the middle of May the plants may be turned out of the pots in the open border in light soil, and there they may remain until August or early in September, when they should be potted and placed in a cold frame.

MUSK TREE (*Idem*).—The spray is, we think, Guarea Swartzi, which is a stove tree from Jamaica. The whole plant has a strong odour resembling Musk, and so has Guarea grandiflora, neither of which are in general cultivation. Its foliage is good, and its perfume renders it very desirable. Propagation is effected by cuttings of ripe shoots in April or May in sand under a bell-glass in brisk bottom heat. It is not at best other than a tardy-rooting subject from cuttings, and even layers root slowly.

CYCLAMEN PERSICUM (*An Amateur*).—Sow the seed at once in turfy loam, leaf soil, sandy peat, and silver sand equal parts, and cover about a quarter inch deep with fine soil. Place in a hotbed and keep moist. The plants will soon appear, one leaf first, then two, and when they are showing the second pot them off singly in 3-inch pots in the same compost, but with only a sixth of silver sand. Put so that the corms are just covered with soil. Return to a hotbed, or place on shelves in a house where there is a brisk heat and moist atmosphere; keep moist, but avoid making the soil sodden by too heavy and needless watering. They do well in a stove, a Cucumber house, or anywhere near the glass in a warm and moist house. When they fill the pots with roots shift into 4½-inch pots, and again as these fill with roots into 6-inch, selecting the largest for this size. If kept growing during the winter they will flower well next spring, but to do this they require a cool stove or warm greenhouse temperature.

PROPAGATING SHRUBS (*West Coast*).—Your soil will grow almost any and all kinds of shrubs. To give you names would be to enumerate an extensive list, which you may do quite as well as ourselves from any catalogue. Peat is the best soil for Rhododendrons, and they will flower this season if transplanted now. Sweet Bay cuttings under hand-glasses in a shady border at the end of August or early September. Portugal Laurel by cuttings, with about an inch of old or last year's wood, in a shady border in a sheltered situation about the middle of September. Aucuba same time and position, but better under a hand-light or glass. Laurustinus in sandy soil at end of September in a sheltered shady border. Pyracantha, layers in autumn. Pyrus japonica, suckers, which spring freely from the root; layers in autumn; or ripe-wood cuttings after the leaves are fallen. Mahonia, Berberis Darwini, B. dulcis, all three from seed sown in spring, of which you may save plenty of seed, only keep from birds; or by suckers, but seedlings are every way preferable. Box by cuttings about 6 inches long in sandy soil in a shady border in September. Enonymus japonicus, cuttings of ripe shoots in August under a hand-glass in a shady border in sandy soil. Arbor Vitæ, cuttings in sandy soil under a hand-glass in a warm shady border, but better by seed sown in April in a warm border. Junipers by cuttings in September in sandy firm soil in a shady border under a hand-glass; or seeds, which do not vegetate under a twelvemonth, often two or more years. Yews, cuttings in sand in a shady border, and a heel of old wood; better by seed, which will not appear until the second or third year. Escallonia, cuttings of shoots in August in sandy soil under a hand-glass.

ROSES—PRIMULA JAPONICA (*Idem*).—For your soil we should have the Roses on Manetti; upon own roots they do not grow nearly so vigorously. They will not answer upon Manetti stocks for standards; those will need to be on Briar stocks. Primula japonica flowers at this time of year, April, and May, and it is perfectly hardy. Primula cortusoides amœna is increased by division, as you will see particularised in the article to which you allude.

DOUBLE WHITE VIOLETS (*Flora*).—The double white Violets mentioned in Bacon's Essays as flowering at Easter were no doubt the same as those now cultivated under that name, and which may be had of any of the principal florists advertising in our columns. Queen of Violets is large, white with purple blotches, and very sweet.

GERANIUM LEAVES CRUMPLED (*Idem*).—The leaf sent is not diseased, but the atmosphere in which they are growing is too cold and dry, the crumpled state of the leaves being caused by a chill or sudden check to growth. There is also an appearance of thrips having been active upon them, which may be destroyed by fumigation with tobacco.

SPARAXIS NOT THRIVING (*Idem*).—The treatment of these plants in pots is as follows:—Plant in September or October five or six bulbs in a 5 or 6-inch pot, using a compost of equal parts turfy loam, sandy peat, and leaf soil, with a sixth of silver sand. They should have the soil made firm about the bulbs, inserting them about an inch deep, and place in a cold pit or frame, plunging in ashes, and keep cool, no water to be given until the foliage appears, then give it sparingly, increasing the supply with the growth. Early in March they may be removed to the greenhouse, placed on a shelf near the glass, and be duly attended to with water until in flower. We apprehend your plants have been kept at a distance from the glass, have been too heavily watered, and not had enough light and air.

POULTRY, BEE, AND PIGEON CHRONICLE.

A VISIT TO MR. VANDER MEERSCH.

"I HAVE over four hundred birds to show you, and shall be very pleased for you to see them. Balham is the best station to reach me by, as more trains arrive there than at Tooting. Just drop me a line." Thus wrote Mr. Vander Meersch many months ago, but no opportunity came for my accepting the invitation until recently.

Now, there are many stations at which the traveller's only wish is to get *on*, and the wish to get *out* never enters his head. Many such are around London, but there are others where the country looks so pleasant, or the town or village looks so bright, that one quite longs to get out and take a ramble. Such a one

is Balham. Often and often had I passed it in spring, and autumn, in summer, and especially in winter, but it always smiled a welcome. Pleasant-looking treey Balham! for after all the fine trees were what had captivated my eyes, and made we wish to see the place.

But what a winter we have had! How cruel to man and beast, and bird! Oh, that snowy freezing December, and February still worse to bear because of the mild January preceding. Surely March will make amends! but March 1st piercingly cold, with north-east wind, no sun, no cheerfulness. March 2nd just the same. March 3rd rather worse, because of little spiteful snowflakes that almost blind one. What days to walk up Piccadilly with the wind in your face! Metropolitan railway stations usually cheerful, but cheerless now, with shoeblack boys having no customers, for people dare not stand still and take bronchitis. March 4th comes, and—"Why, really, you don't mean it, do you? there you are at last, my old friend, Sol." Positively there at ten o'clock is a little sunshine, more at eleven, and by noon, when I reach Balham station, it is really a pleasant bright March day.

Now has come the time at last to walk through the place I had so often admired in passing. How broad, and bright, and pleasant the street is! how well kept the houses and gardens!

There is my friend, a butcher's boy (N.B.—Always ask your way of a butcher's boy, for he is a walking, or rather driving, local directory). I pause till the said boy, rosy and plump as his beef, has ceased his flirtation with that pretty maidservant. Just as a hungry man is an angry man, so an interrupted lover is liable to be cross. "Will you tell me where Mr. Vander Meersch lives?" "Why, sir, at Lower Tooting." "Well, is this Tooting?" "Some calls it so, but I call it Balham, and Upper Tooting begins at the 'Wheatsheaf.' Go straight on for a mile, cross a broad way, and on the left opposite, a big red-brick house, is Mr. Vander Meersch's." Now, there's a butcher's boy for you; his information clear, concise, and easily remembered. Had I interrupted his love-talk I should not have had such a good direction. Note.—Always be judicious, and do not speak at wrong times. Attention to this and like matters make a man get on comfortably in life. Discretion oils the wheels of life and makes the machine run on smoothly.

Thanks to that butcher boy my troubles are at an end. I stroll on in enjoyment, not in doubt. Presently I come to the "Wheatsheaf," for there is its sign, and there in the door the host. I come soon after to the broad crossway. There's the large red-brick house, just one of those you rarely see anywhere except near London. Why it is I know not, but around London there are grand red-brick mansions, their colour toned by time, most pleasing to the eye, giving an idea of warmth and comfort which no stone can give. Some stone for dwellings chills, as, for instance, all who know Aberdeen feel chilled when walking the streets by the cold grey granite of the houses.

Would that men would now make such good red brick as in the years when Hampton Court was built, or when many such houses were as the one I now look at. Directly opposite I see Mr. Vander Meersch's name on a wicket, and walk in through a nice roomy garden to a most snug old-world romantic home (for home is the only word), named "The Walnuts"—suitable name, for walnuts came to England in Henry VII.'s reign. Soon I enter a regular cosy parlour; and though I am as yet alone I know it is Mr. Vander Meersch's, for on a side table is a stuffed Black Trumpeter, a bird that in life I remember well, and a grand bird it was. There, too, on a table in the window is a stuffed White Jacobin, another grand bird; but as yet we Pigeon fanciers have not found a bird-stuffer who is a fancier, and therefore no dead specimen has justice done to it. Above me chirps a good Norwich Canary; at my feet is a toy terrier, while a black retriever makes love to my hands. Around me are glorious hyacinths, and I sit and wait for the master's arrival, feeling a fancier in a fancier's home.

I do not wait long, for Mr. Vander Meersch soon arrives, and with him I begin the tour of his premises. He is particularly fortunate in having so much space, and yet so near London. Before the house lies a square of lawn all—house and lawn—within walls. On the lawn are fowls enjoying a ramble. Two sides of the lawn running around the interior of the outer wall are wooden poultry houses and runs, each a semi-detached villa, with a run at either end of the block; two houses and their runs, then two more, and so on all round the two sides. They are very neat erections and do not look awkward, as they are low-roofed.

Mr. Vander Meersch manages to keep thirteen different varieties of fowls, in size varying from Black Cochins to Game Bantams. There were Hamburghs, too, of every variety. I was glad to see the Black Cochins, for they are a class which need much to be taken up by fanciers. We have plenty of good Whites, but Blacks are few indeed. I stroll round admiring the neat arrangement of the houses and the excellence of their inmates. Indeed the whole plan is admirable, including the exercise-lawn in the centre, with flower beds protected by wire.

Come we next to the Pigeons, looking up as we pass to a loft above a stable—a deserted loft now, for it brought sad reflections, for the rats forced their way in and destroyed many birds. First within an enclosure I come upon Pigeons kept on the pen system, almost as Rabbits are, the birds sitting in one part or division and living in the one adjoining. In these I found good Fantails, tame as cats from constant companionship with their owner, large Runts, small African Owls, also Jacobins, and they were Mr. Vander Meersch's Jacobins that I particularly wished to see. He is breeding not only for Blues but Silvers, and is on the way to success.

These colours will be a very agreeable addition to our shows. We have Red Jacks and Yellow Jacks in abundance and of admirable quality. Then come Blacks, striking by the contrast of the white head and black hood, but other colours there might be. Now, as I said, Mr. V. is breeding for Blues and Silvers, and what we have begun to see good—viz., Whites, as witness that beautiful White Jack shown by Mr. Fulton at the Bristol Show. The difficulty with the White is of course getting rid of the bull eye and obtaining a good pearl eye in its place, as bull eye and white feather will go together; this, however, may be done. There is another colour which I used to see—viz., Mottles, which I should again like to be shown.

A correctly mottled Jack would be as good a colour as in Tumblers, and the old fanciers had Reds, Yellows, Blacks, Blues, and Mottles. Duns would hardly be a desirable addition, but a clear Blue as good in colour as a Dragoon would be a great addition, for I fully believe in old Girton when he says "Jacobins are by far the prettiest Pigeons of the Toy kind." We may look for first-class Blues, Silvers, and Whites in a few years from Mr. V.'s stock. Next I come into the largest compartment of all for the Pigeons, some 30 feet long by perhaps 10 wide, all roofed in, and with a close wire front. Around me are the shelves, on the old principle of being open, save having a blind to hide the nests.

All sorts of Toy Pigeons are before me, and some that are not Toys—Turbits, Nuns, Barbs, Trumpeters, and Dragoons, and a few Shortfaces. I handle several, and see Mr. V.'s plan of matching-up for the season. To show the difficulties which fanciers have to contend with, and true fanciers overcome, I am shown a most perfectly Shortfaced Jack, but—it has orange eyes; then a Black with a chain and hood of marvellous length, but—half its face is black and the beak very pleasant-faced. But these birds will form ingredients from which will come grand and perfect prize birds. And herein lies the ceaseless pleasure of Pigeon fanciers; they have always a "Hill Difficulty" to meet and surmount. I go on to other like, but less lofts, and see many birds, upwards of thirty varieties being kept by Mr. Vander Meersch. Among the Fantails was a blue-laced hen, a *rara avis* indeed. Wiltshire met me too, for among the White Pouters was one from Mrs. Ladd of Calne.

Having made the tour of the premises to the great disgust of a most savage bull-terrier, who regarded me probably as the well-dressed head of a gang of burglars who had come disguised as a clergyman in order to spy out the weak point for attack. Oh, that bull-terrier, with his chain shortened to save my calves, which quivered with fear, as I had to pass very near him once or twice!

Returning to the house, having perambulated the whole premises and seen everything down to horse, Alderney cow, and that terrible dog, I sit down to lunch in a room hung round with old Mr. Wolstenholme's portraits of prize Pigeons; almost every fancier has them, and some of them are still good, although time and fanciers have made great strides onwards since they were drawn, as in the Trumpeter and Pouter; but the Lance Fantail and the Black Short-faced Tumbler are excellent, and will please for ever. Chattering over luncheon and talking Pigeon-talk, I am next shown by Mr. Vander Meersch his prizes, cups, and, what are much more useful, a silver tea-apparatus, &c.

But the day wears, and I must be in Wiltshire by night. On my way to the station I am shown peeps into the vast houses for orchids, azaleas, heaths, &c., in Rollisson & Son's nursery, with which Mr. Vander Meersch is connected; thus he is a sort of walking *Journal of Horticulture*, for his life is spent among flowers and birds. Happy man to be situated, and not "pent in a populous city." But time and trains wait for no man, and with a hearty shake of the hand with my pleasant Belgian friend I hasten to Balham station, having enjoyed greatly the best part of a fine March day with Mr. Vander Meersch.—Wiltshire Rector.

The Bath and West of England Society meet this year at Croydon. The Exhibition opens on May 31st, and closes on June 4th. Croydon being so quickly accessible from London, if the weather proves favourable the visitors will be numerous. The poultry prizes are liberal, and there are fifteen £5 cups. We are sorry the Society adheres to the injurious rule of requiring the birds to be delivered on the Saturday. We know to our cost that the Sunday frequently spoils the looks of many of the birds before the judges come round, for the pens are made very dirty. We wish the Society would admit the birds on

Monday, to be judged on Tuesday. Is it too late even now to have this remedied? The schedule, too, in other ways is behind the times. Every pen must be sent in a separate basket. We had hoped this rule was to have been obliterated from all schedules. Then, Black Hamburghs, which generally muster strongest of the Hamburghs, are left out entirely. Game Bantams are huddled into one class with only two prizes, and there is no Bantam variety class. Pigeons have sixteen classes, and no cups. We are glad to see one of those sixteen is for our friends the Archangels. No colours are divided; but Turbits of all colours, Tumblers of all breeds, and Dragoons of all sorts have each to go to their one class.—W.

POULTRY-SHOW EXPENSES.

We are frequently asked whether poultry shows usually are self-supporting, and what expense a show of a fair size entails? We have before us the balance-sheet of a show held during January last, and from it we may gather some of the items of expense connected with such exhibitions. We must first, however, say that we do not think shows are usually self-supporting. The expenses are legion. The outer world and exhibitors generally have no idea of the large expenditure a poultry show entails.

Looking over the lists of shows held during the past ten years we find very many which only continued two or three seasons. They collapsed from the mere fact that the committee would not endure loss year after year. There are, however, so many towns and villages ready to have a show whenever a suitable date occurs, that those discontinued are not missed. Of course many summer shows have been going on for many years, and seem to thrive, but they are generally connected with an agricultural association, and conduce to each other's prosperity. Then there are some shows which, perhaps, from careful generalship and genuine hard work do succeed and fight their way well, and become annual events. Of such a show we cannot have a brighter example than that held at Oxford.

The Crystal Palace, Birmingham, Manchester, Bristol, and such-like shows we look now upon as national institutions; but poultry exhibitions generally we do not think are profitable. They commence with poultry, then a few Rabbits are added, then cage birds, and then cats to make the family party happy. But all these latter pets are merely added as elegant baits to tempt in the outside world, who, busy in the daily avocations of life, pass the very doors of the exhibition without turning in, regardless of cocks crowing and of Canaries singing. Even these baits are short-lived, and the people, when it ceases to be a novelty, neglect to come. Then the show puts up its shutters from want of local support, without which shows cannot live.

We often think the inhabitants of some places are more energetic than others; what else can account for the extraordinary manner in which some poultry show rooms are filled with visitors, and others literally empty? For examples take Bristol and Oxford. We have been in the Drill Hall in the former city and not seen more than a score of people, and the whole of them almost fanciers from a distance—strangers to the town, and this is, we fear, the state of things generally at Bristol; while we have been present at every one of the evenings of the three Oxford Shows, and on each occasion found the buildings so filled to overflowing that literally it was impossible to move, and the whole crowd kept surging round the rooms unable to see a feather. This we should like to see at all shows. We do not mean an inconvenient crowd, but each show well supported by its townspeople.

An exhibition causes much money being spent in the town, and in return the residents should all do their best to make it a success. When we are asked for advice about establishing a poultry show we always strongly recommend having two committees: the one composed of a few working fanciers who really know what to do and are willing to do it, and the other consisting of as many members as possible, each to guarantee £1 in case of loss. This stimulates them to promote the interests of the show and to enlist visitors. By it a large sum of money is guaranteed in case of debt, which falling on many pockets makes the sum for each to pay quite a nominal one, and so does not prevent another trial being made. This is a good plan, and we have known it to work well.

Too large a working committee is most disastrous. Everyone thinks he knows best, and nothing is arranged to the satisfaction of all; but on the working committee there must be some real fanciers—men who know the ways and movements of exhibitors; a committee of novices fall into all kinds of mistakes and needless expenditure.

The show of which the balance-sheet we have before us was a first exhibition, and comprised poultry, Pigeons, cage birds, Rabbits, and Cats. We find the entries amounted to very nearly a thousand, which is a fair, though by no means a large, number for the amount spent in cups and prizes, which amounted to £195. The entry money came to about £170, making £25 difference between the two. We always like to see the fees pay the prizes, and this should be the case. Here, however, the dates were badly chosen, and a Sunday absurdly included, which of course lessened the number of entries. We find the charges for about eight hundred pens came to close on £40, nearly 1s. each. Judges' fees amounted to £19, which we think reasonable, for the staff was a large one and good, consisting of no less than six gentlemen. Labour, materials, attendants, and food came to about £80, and printing, advertising, and posting, £40 more. The rent of rooms and refreshments for judges and staff about £30, making a total expenditure of nearly £400. We must remember that the secretary was an honorary one, and did not cost the society anything.

This, then, is the expenditure for a show of about a thousand pens. We do not consider that it was extravagantly worked, nor peculiarly economically; but it was well done, and the arrangements were good. Against the outgoings we find £143 taken at the doors on the three days of the show, £170 for entries, and about £32 collected in the neighbourhood for cups and pieces of plate, a great part of which was contributed in half-crowns, the energetic honorary secretary having opened a ladies' subscription list of 2s. 6*d.* each, and so collected a goodly part of the £32 without any especial call on anyone's pocket. We can recommend very strongly this most useful and successful plan of obtaining some prize plate to give a schedule a healthy look; and then, lastly, there were about £10 commission on sales. Thus the receipts only came to £350 against an expenditure of £400, and a debt of £50 remains. Now, had there been only a small committee this debt would most likely have prevented their holding another show; but the two committees existed, and the second being a large one, the loss will be equally distributed among all of them, and so no one will really feel much inconvenienced, and they are, we believe, already looking forward to holding their second exhibition.

One word in conclusion to exhibitors and the fancy generally. We think all should do their best for shows, not only in supporting them with entries, but by being as courteous and civil as possible to the show authorities, for they are mostly men who from genuine love of the feathered world give much valuable time and a large outlay of money to promoting the welfare of the fancy, reaping, in many cases perhaps, as a return only rude treatment from those whose interests they have been serving.—W.

HOUDANS LAYING.

I am sorry to see in the last two numbers of the Journal complaints of Houdans not laying.

From twenty pullets I have had an unfailing supply of eggs since November; only two or three a-day in that month and December it is true, but always some eggs. Now they are in full laying.

I feed on bruised oats, small wheat, and corn dust slaked with pot liquor, and mixed with kitchen scraps, given warm in the early morning and again at noon, their last meal being the best whole oats.

They have a large grass run, but it has proved a snow run mostly this winter for them, yet they have laid well, fine, large, rich eggs.—Sabrina, *Aberdeen, N.B.*

I am much obliged to your correspondents for their notice of my questions about Houdans. Would not some more breeders give us a fair and candid statement on this point? for I wish to be assured about it before I break up my yard. They have other good qualities, and I admire their appearance; but if they are faulty in this respect I must change for some other breed.—D., *Deal.*

STANHOPE (NEAR DARLINGTON) POULTRY AND PIGEON SHOW.

This was held in a large tent near the railway station on the 20th inst. The Show, although only small, contained some very good birds. The *Game* were excellent and the entries large. In single cocks there were thirteen; both prizes being taken by the same exhibitor with Duckwing and Brown Red, each superior, stylish birds. The three highly-commended pens were Brown Reds. In Black or Brown Reds (cock and hen) both prizes went to the latter colour, very good close-feathered birds. The Duckwings were a good class, and besides the prizes two pens were highly commended. The first-prize *Spanish* won the cup for the best pen in the Show, and also the cup for the best pen within three miles of Stanhope. They were very good, and shown in fine condition. The cup for the best pen of *Dorkings* went to Darks. Neither of the Dorking classes were good, and the cup certainly was of more value than the birds. The *Hamburgh* classes were very fair for the locality, but they might have been better; many of the combs were faulty. The Game *Bantams* were of medium quality. In pairs of hens a capital pair of Brown Red Game were first, a perfect match, and good in all points; second went to Grey Dorkings;

and four pens were highly commended. The *Duck* class was a very creditable one with thirteen entries, Aylesburys were first and Rouens second; and six pens highly commended. The first-prize *Turkeys* were very good, and in capital condition.

The PIGEONS were not large entries. The cup for the best pen went to a very good Carrier, and the next best was a Barb belonging to the same exhibitor.

The RABBITS were not first-class with one or two exceptions. The total number of entries was 165.

SPANISH.—Cup, J. Craig, Bridgend, Frosterley. 2, T. Flintoff, Ruby, Stockton-on-Tees.
DORKINGS.—*White.*—1, Master J. Morley, Stanhope. 2, H. Pease, Stanhope Castle. *hc*, W. Love, Wolsingham. *Any other variety.*—Cup, J. Lodge, Woodcroft.
GAME.—*Black-breasted and other Reds.*—1, M. Bainbridge, Stanhope. 2, J. Gibson. *Any other variety.*—1, J. Gibson, Stanhope. 2, J. Fenwick. *hc*, M. Bainbridge; J. Rowell. *Any colour.—Cockerel.*—1 and 2, M. Bainbridge. *hc*, G. B. Bell, Leyton; J. Sanderson (2).
HAMBURGHS.—*Golden-spangled.*—1, W. Simpson, Pyeclose. 2, W. Urwin, Edmondbyers. *Silver-spangled.*—1, G. Barkas, Crawleyside. 2, J. Sanderson. *hc*, G. Barkas; H. Surtees, Edmondbyers; J. Hutchinson.
HAMBURGHS.—*Golden-pencilled.*—1, A. G. Michel, Bishop Auckland. 2, G. English, Frosterley. *hc*, G. English; J. Foster, Hedleyhope, Towlaw. *Silver-pencilled.*—1, J. Foster. 2, W. Jopling, Bridgend, Frosterley. *hc*, W. Simpson; M. Ridley; W. Jopling.
POLANDS.—1, J. Jackson, Hedleyhope, Towlaw. 2, W. D. Maddison, Sunniside.
GAME BANTAMS.—*Black-breasted or other Reds.*—1 and 2, W. Gray, Towlaw. *Any variety.*—1, J. Hutchinson. 2 and *hc*, W. Gray.
ANY VARIETY.—*Hens.*—1, T. McKenzie, Stanhope. 2, T. Curry, Wooderoft. *hc*, G. B. Bell; M. Ridley; J. Fenwick; J. Sanderson.
ANY OTHER VARIETY.—1, J. Littlefair. 2, J. Rowell. *hc*, G. B. Bell.
DUCKS.—1, W. Love. 2, W. Simpson. *hc*, W. Love; G. B. Bell; J. Bright, Bewley; J. Buston, Wolsingham (2); T. Briscoe, Frosterley.
TURKEYS.—1, H. Pease. 2, J. Currey. *hc*, W. Love.

PIGEONS.

CARRIERS.—Cup, W. Taylor, Sbotley Bridge. 2, S. & W. Coulson, Wolsingham. *hc*, S. & W. Coulson; R. & T. Sanderson.
BARB.—1, W. Taylor. 2, J. Young, Bishop Auckland.
JACOBINS.—1, G. Trueman. Fore Boudgate, Bishop Auckland. 2, J. Young. *hc*, J. Best.
TUMBLERS.—1, S. & W. Coulson. 2, R. & T. Sanderson.
ANY OTHER VARIETY.—1, J. Stephenson. 2, J. Young.

RABBITS.—1, M. M. Maughan, Bishop Auckland. 2, H. Pease. *hc*, A. Friend Bishop Auckland; H. Thompson.

Mr. James Dixon of Bradford was sole Judge.

NATIONAL ORNITHOLOGICAL ASSOCIATION.

NOTICING in your report of the Crystal Palace Bird Show some reference to the "N. O. A.," which I interpreted as meaning the National Ornithological Association, may I ask what action that Association intends taking as to the holding of an exhibition or exhibitions?

Some time back I was solicited to become a member for which I paid a sovereign, receiving in return a card of membership and a code of rules, with the understanding that certain shows would take place during the latter part of 1874. "Judging by *points*" appeared to be the hobby-horse of the Association. Whether it has made a *full stop*, or what is intended to be done, I am at a loss to know.

If no action is taken by those at the helm of the Association as to the holding of the promised exhibitions, I shall most certainly decline to continue my subscriptions.—ONE IN THE DARK.

FROSTERLEY SHOW OF POULTRY, &c.

THE eleventh annual show of poultry was held at Frosterley on the 27th ult. The Exhibition was in all respects a good one. We may particularly notice the *Game* classes; they were very superior to most local shows. The number of entries in the poultry and Pigeons was 212, and in dogs and butter 98.

The cup for the best pen shown by an exhibitor in the parish of Frosterley was won by a very good pair of Dark Dorking hens. The first-prize *Spanish* were very good, the others only medium. The *Andalusians* (for which there was a class) were very poor, all evidently a cross of the Spanish. *Dorkings* and *Cochins* were fair birds. The *Brahmas* mustered thirteen entries, some good birds in the class. The *Hamburghs* were about an average in quality. The first-prize Golden *Polands* were remarkably good, the cock's crest the best we have seen for a long time.

The *Duck* classes were well filled; both the Rouen and Aylesbury were very good, particularly the prize birds. *Geese* and *Turkeys* large, and in good condition.

The *Pigeons* had only four classes, consequently the entries were not numerous; but the prize birds were very good.

SPANISH.—*Black.*—1, J. Craig. 2, T. F. Newby, Stockton-on-Tees. 3, M. Amor. *Blue.*—1, J. Craig. 2 and 3, J. Holroyd.
DORKINGS.—1, T. F. Newby. 2, J. T. Proud, Bishop Auckland. 3, T. Currah, Woodcroft.
COCHIN-CHINAS.—1, Mrs. Ridley, Peakfield. 2, G. B. Bell, Coldwell. 3, E. Pickering, Bishopley.
BRAHMA POOTRAS.—1, W. T. Whitfield. 2, F. E. Gibson, Middleton Teasdale. 3, G. Atkinson, Etherley.
GAME.—*Black-breasted and other Reds.*—1, C. E. Morgan, Bishop Auckland. 2, M. Bainbridge, Stanhope. 3, W. Younghusband, Darlington. *Any other variety.*—1, J. Gibson, Stanhope. 2, T. Horne. 3, C. E. Morgan. *Cock.*—1, J. Harker, Crook. 2, C. E. Morgan. 3, J. Gibson. *Cockerel.*—1, W. Younghusband. 2, C. E. Morgan. 3, G. B. Bell.
HAMBURGHS.—*Golden-spangled.*—1, W. Simpson. 2, J. Potts, Sunnyside, Tow Law. 3, J. Scott. *Silver-spangled.*—1 and 2, G. Barkas, Crawleyside. 3, J. Sanderson, Stanhope. *Golden-pencilled.*—1 and 2, G. English, Frosterley. 3, T. Robson. *Silver-pencilled.*—1, M. Ridley, Peakfield. 2, W. Jopling. 3, W. Simpson.
POLANDS.—1, 2, and 3, J. T. Proud.
GAME BANTAMS.—*Black-breasted and other Reds.*—1 and 2, W. Gray, Tow Law. 3, W. Canney, Bishop Auckland. *Any other variety.*—1 and 2, W. Gray. 3, Rev. J. G. Milner, Hamsterley. *Cock or Cockerel.*—1 and 2, W. Gray.
GAME.—*Hens.*—1, J. Barkass. 2, M. Bainbridge. 3, J. Waller.
HAMBURGHS.—*Hens.*—1, H. Surteees, Edmondbyers. 2, W. S. Whitfield. 3, W. Ridley, jun.
ANY OTHER VARIETY.—*Hens.*—1, T. Currah. 2, G. B. Bell. 3, J. T. Proud.
GUINEA FOWLS.—1, J. Gibson. 2, J. Ridley. 3, T. Currah.
DUCKS.—*Aylesbury.*—1 and 2, W. Canney. 3, T. Briscoe, Frosterley. *Rouen.*—1, W. Canney. 2, Rev. J. G. Milner. 3, R. Charlton. *Any other variety.*—1 and 2, Rev. J. G. Milner. 3, W. Canney.
GANDER.—1, W. Love. 2, T. V. Johnson. 3, J. Vickers.
TURKEYS.—1, Miss Proud. 2, H. Pease. 3, J. Currah.

PIGEONS.—*Carriers.*—1, S. & W. Coulson, Redgate. 2, R. & T. Sanderson, Stanhope. *Barbs.*—1 and 2, J. Young, Bishop Auckland *Jacobins.*—1 and 2, J. Young. *Any other variety.*—1, S & W. Coulson. 2, J. Young.

Mr. James Dixon, Bradford, acted as Judge.

A FRAGMENT ABOUT POUTERS.

GERALD.—The fish seem to have left off feeding, Walter, for I have not had a rise for some time. Come, let us sit down beneath the shade of this tree, and see what Margery's basket contains.

WALTER.—Here are seven good speckled trout, and more to follow I hope. We will rest awhile and pay our respects to that great pie, drink a cup, and smoke a pipe thereafter.

GERALD.—How does the young blue get on, Walter? It is three weeks old now, and you will see how its markings are.

WALTER.—It will be well pinioned on each wing and clean on the limbs, I think; but I fear for the bib, as the highest feathers on the breast are still white. How do your young red pair thrive?

GERALD.—The biggest and best marked is, I fear, to be off-colour, for the tips of its feathers are lighter than I like. The other with the bishop wing is sound in colour, and will, I think, moult into a blood red.

WALTER.—My black hen laid last night; but the yellows have broken their eggs again. I had no change for them; but the next time I shall shift their eggs about till hatching time should I not have a pair of feeders lay within a day or two. The yellow cock is a heavy sitter, and works his nest down to the bare boards. Let me hear the lines you say you composed, Gerald; but wait till I fill and light my pipe.

GERALD.—The lines are of little account, Walter; but I will let you hear them as you wish. I found an old work at the stall of a dealer in old books the other day, that treats of fancy Pigeons, and after reading it by the fire I fell a-musing over my pipe, and wrote down the following, which I shall call

THE FOUR POUTING PIGEONS.

First comes the yellow Pouting cock,
Clad in his suit of golden-coloured hue
And markings all complete, that you
Might scarcely pick a fault in him throughout.
Bright as an orange and as round, his crop
Is marked with crescent ending fine at points,
Nor reaching to his eyes to blur their fire.
Next see the red, with hollow taper back,
And well-set limbs inclining at the hock,
His downy feathers fitting like a sock.
Nor long toe feathers doth he any lack.
Red as the flowing heart blood of the slain
His jerkin is. But, look! here comes the black.
So burnished in the sunlight doth he seem,
Rather than black, to be of glossy green.
Rose-pinioned on each wing, sharp cut below,
No blaze face nor foul thigh marks doth he show.
But yet the blue, of hue like summer sky.
And markings white, like fleecy clouds thereby.
His purple neck, and wing bars all of jet;
Across his tail a darker band is set.
Tight-shouldered, narrow-girthed, flights broad and long,
He walks with stately mein, nor rumps along.
Neither too thin in limb, nor yet too rough,
His joints are not too straight, but bent enough.
For beauty, stylish shape, and symmetry,
Though last he comes, the king of all is he.

—POUTER ON THE BRAIN.

OWL PIGEONS AND DRAGOONS.

I TAKE up my pen with much pleasure to reply to Mr. J. C. Lyell and "BUBO." I say with *much* pleasure, because both writers have a great regard, Mr. Lyell particularly, for the authority of the old writers on Pigeons—the, so to speak, "fathers of the fancy."

Pigeon-culture is not a science of yesterday, for its great authority dates back to 1735; and though I hail every true improvement with pleasure, yet we must always advance on the old lines. To illustrate my meaning by an instance of the opposite character I take a pert and perky letter which appeared recently in a contemporary on the Dragoon. The writer states

that "Dragoons are a distinct breed—as distinct as the Short-faced Tumbler is from the Runt," and that "a Dragoon should be a large bird, even larger than a Carrier;" in utter ignorance that Moore in 1735 wrote, "The Dragoon is absolutely and without dispute a bastard strain, being bred originally from a Horseman and a Tumbler," and "the Horseman," from which it is bred, he says, "is smaller than the Carrier." Much more so, of course, is the Dragoon, which point, however, is settled by Girton, who wrote, "The Dragoon is a lighter and smaller-made Pigeon than the Horseman." I could quote more mistakes from this said "pert and perky letter," but I have quoted enough to show that ignorance ought never to set up as teacher; indeed, ignorance as to what a Dragoon is according to the great authority is the foundation on one side of the whole discussion. Now, in Mr. Lyell I have one who possesses, reads, and respects Pigeon authorities as much I do myself. We can, then, discuss the nature of the Owl on the proper basis of rightful authority.

Mr. Lyell correctly states that in the Treatise of 1765 it is written, "The Owl is, according to Mr. Moore, a small Pigeon, very little larger than a Jacobin;" but, unfortunately, Moore states nothing of the kind. This mistake of the author of the Treatise is pointed out by Mr. Tegetmeier (*vide* "Pigeons," page 139), who, after quoting the words of the Treatise about the Owl, writes, "This statement of the writer is erroneous, for Mr. Moore says nothing whatever of the size of the Owl, but makes the assertion quoted concerning the Turbit."

Moore was undoubtedly a good fancier and correct writer, and his work was original. He was a scholar, and a friend of Pope the poet, but he died soon after he published his book; and after thinking much on the subject I have come to this conclusion concerning both the author of the Treatise and Girton—viz., that they were simply a couple of booksellers' hacks. The former quotes Moore throughout without acknowledgement, which is the conduct of a dishonest man; and Girton, also known as Thompson, most amusingly transposes the sentences in order to avoid being the same. Sometimes the beginning is put at the end, and the varieties do not follow in the same order. The cards are cleverly shuffled, but, as a rule, they are the same cards. A bookseller in those days found there was a demand for a work on fancy Pigeons; they got hold of Moore's book, got a competent writer, and he got hints from some fanciers and some pictures, and redressed old Moore, and, as a rule, the whole was done wonderfully well, but as to the size of the Owl a mistake was made.

The English Owls have always been moderately-sized Pigeons, as Turbits have been and are, and as Jacobins have been and are; for though the Jocobin has been written of as one of the smallest Pigeons, it never was—it only, according to fancy rule, ought to be. The Owl has always been a flying Pigeon, and many Antwerps used to show a bit of the Owl frill. This, I think, is conclusive about its size, for no very small Pigeon can fly much, it is too weak. English breeders of African Owls have spoken of them to me as "sort of greenhouse birds." In a warmer country no doubt they would feel more at home in the air and on wing, so I am not surprised at their doing well in India.

Next about the term "degenerate" as applied to the African Owl, to which "Bubo" objects. I mean it in the same sense as a Short-faced Tumbler is degenerate—namely, "having declined from its natural growth" or become smaller, as the French soldier of to-day is smaller than the soldier under the first Napoleon. I did not mean "degenerate" as a term of reproach, but as meaning smaller and feebler. No one can admire the Foreign Owl more than I do, and I agree with "Bubo" thoroughly that the best colour is white; it is a fairy-like little Pigeon, and white just suits it.

Then comes the question, How about the two varieties? Well, I would say they are simply the production of two climates; the Foreign of the warm climate, the English of our colder climate. That is how I would account for the difference. I believe imported Barbs are smaller than those English-bred, and which are naturally bred in England, I mean not bred in-and-in.

The analogy between the English and Foreign Trumpeter hardly, I think, holds good, as the Foreign bird is the larger and finer, coming (climate again making the difference I imagine) from a colder country. Unfortunately the Foreign Trumpeters will not breed in England, while fortunately the African Owl will.

I think I have now noticed every point mentioned by Mr. Lyell and "Bubo," and I am truly glad that two educated and intelligent writers, learned also in the old books, and respecting their authority, have come to the front, and I welcome them heartily, and hope their pens will not be idle. We want such writers, and not writers of "pert and perky" letters, who are Pigeon-ignorant save in what some judge they approve likes.

Mentioning judges, I hope all the newer ones will read the old books, or they will lack knowledge they ought to possess, for the Pigeon fancy is no new thing, but at least one hundred and fifty years old, or indeed much older.

Reverting once more to the Owl, I hope English and African Owls will both be bred and prizes offered for each as they now are. A mixture of the two birds, to my eye, spoils both.—Wiltshire Rector.

N.B.—Looking at my copy of Girton I see it is called "The New and Complete Pigeon Fancyer." How unprincipled those eighteenth-century writers were! for the book is simply what might have been correctly termed "A Third Edition of Moore's." No doubt the writer of the Treatise and Girton both had practical fanciers to tell them much. Girton also gave (copied, no doubt) the natural history of the Pigeon, but with blunders. The two books were made to order for publishers, and on the whole they are well done; but there was no original writer between Moore and Windus of the Almond Tumbler. Hence I am only surprised that Girton made so few mistakes, but one he did make in regard to the Owl, as I have shown, and then built up an argument upon his mistake.—W. R.

CANARY-BREEDING CAGES.

Simplicity of construction in cages for this purpose is one of their chief recommendations. Decorative and emblematic design so frequently witnessed are generally the productions of mistaken but ingenious persons, who have little practical experience and still less compassionate regard for the comfort of their birds. Yet good birds demand good cages, for they are worthy of being displayed to the greatest advantage. The old breeders of the Canary distinguished as "The London Fancy" seem to have been a very painstaking class. Whatever objections may be raised to many of their arrangements, nothing can be said against their excellent breeding and flight cages. They have appreciated the importance of cleanliness, comfort, and the general healthfulness of these constructions, no doubt prompted by the difficulties encountered in breeding this remarkable but delicate bird. Such cages have been in use for thirty years, and after an annual cleaning are in every respect equal to new.

They are generally made of mahogany, and are known as "box cages," rendered very convenient by the front part being wirework, and this removeable. Such cages are so constructed that the feeding cage for weaning young birds can be placed inside or hung on at the doorway, a system to be highly commended in preference to double or compartment cages, as there are better facilities of thoroughly cleaning than can be where two or more cages are combined; and if they are sufficiently large, which adds but slightly to their expense, they can be readily converted into flight cages for moulting and storage during the winter season, a convenience for which many breeders will be thankful.

Mahogany is decidedly the most lasting and solid wood for making cages, but it has two drawbacks to its general adoption for this purpose—great weight, and expense. It fortunately happens that their requirements can be supplied equally well, and where hanging cages are employed even with advantage, by using American pine; this wood, if well selected, free from knots and cracks, and with the work neatly fitted, and every joint well glued and nailed, makes excellent cages. The glue should be used freely, so that every joint be completely closed by it, for wherever interstices exist you may expect, even with the greatest precaution, a colony of red mites.

Any close-grained well-seasoned wood may be employed, but the pine has advantages not possessed by other kinds, and when neatly stained and varnished can be made very effective. Mahogany may be employed for the removeable parts, because it is stronger and can be kept thinner and lighter for appearance.

The only ornament necessary is that the front edges of the body of the cage be stop-chamfered. The stop-chamfering may be cut in with black which adds greatly to the appearance. Should the cages be bought in the white—that is, without any colouring inside or out—you can finish them to your own taste as follows:—Carefully remove any roughness, then rub over with fine cabinet-makers' glass paper, and size the inside and out with two coats of paper size, not too strong; when dry again rub lightly down with the glass paper, and then give the inside a coating of the following paint:—

Oxide of zinc, which may be purchased at any chemist's if not obtainable at an oil and colourman's, rubbed up well into a very stiff paste with a small quantity of copal varnish, and thinned down to the consistency of ordinary paint with turpentine; this may be conveniently done on a large dish or stone slab with a thin table knife. This paint dries very quickly, and if too much varnish has not been used gives a very desirable appearance with two or three coats. It may be tinted with a small quantity of oil blue or other colour according to taste. Before laying on the last coat stop all joints and cracks with glazier's putty. This paint will not be found injurious to birds if allowed to dry for two or three days before using the cages, and they can be frequently washed without re-whitening.

The outside, except where mahogany has been used (which is preferably French-polished), can be stained any light tint and varnished with the following:—Half a pound of shellac dissolved

in a wide-mouthed bottle in one pint of methylated spirit. You have only to mix those two articles, and with an occasional shake-up the varnish will be ready for use in a few days. It dries very quickly, you can lay on two or three coats in an hour, and the cage may be used immediately. For any parts required to be painted black, a small quantity of lamp black stirred into a portion of the above varnish is excellent.

In the spring of every year, say the end of February, and again in August, or as frequently as you may consider desirable, wash your cages over well with strong salt and water, which will destroy all insect life, and give them a thorough scrubbing and rinsing in clean water: this must be done inside and out. If necessary when dry give one coat of white to the inside, and revarnish the outside. Thus you can avoid the red mite.—J. Packham.

BEE OUT-LOOK FOR 1875.

The dawn of the second quarter of the year is always interesting to humanity, at least in the northern hemisphere; and to whom is it more interesting than to the bee-keeper? for all his labours are, as it were, concentrated in the three approaching months of April, May, and June. 'Tis true that the main honey harvest is usually gathered in July, but by no means invariably so. The months of May and June frequently boast of the principal ingathering of the year. What, then, of the season of promise that is now before us? Everything is hopeful this year to all bee-keepers whose stock is vigorous, even though the spring is very late and breeding has not been advancing at a rapid rate, for the winter has been on the whole everything that could have been desired. Snows and frosts have enriched and opened the ground, preparing the way for the fertilising influence of the winds of March and the showers of April: hence I augur an abundance of saccharine matter this summer. So Hope is on the tiptoe of expectation.

We trust, then, that all earnest bee-keepers are on the alert, and have everything in order. The first thing to do, if not done already, is to put the hives in the best possible condition for ulterior work. Floor-boards should be cleansed or renewed, old comb and superfluous drone-comb should be cut away, both being replaced where possible (as in all bar-frame hives) with fresh worker comb saved from stocks which may have failed during the winter. Queenless hives should be broken up, and their population joined to a neighbouring stock. It is a wretched waste of good material to let these die-out. For the same reason all unusually weak stocks should be united to others. Let these various operations be carried out on the first balmy day when the sun is out, and let not the soothing influence of smoke be overlooked in all manipulations of hives. Success often depends upon its use.

Next have recourse to a system of continuous feeding, not in large quantities to supply inducements to the bees to store it, but just enough given on warm days to stimulate the hive into activity, and especially the mother bee, by increasing the internal heat, which feeding always produces. Take care, however, to avoid creating a strong upward current of air, which would chill the brood. For this reason close up and cease feeding at night, and by day also, when the wind is cold, especially if it blows in the direction of the entrance.

Where hives are small it is excellent policy to add ekes to them in the spring. The bees will gladly lengthen-out the combs as the queen's activity increases, and every inch added thus to the hive affords room for the rearing of many thousand bees, whose addition to the population will both furnish large swarms and increase in proportionate ratio the honey harvest of the year. Ekes added for increase of honey space later in the summer are a mistake.

Where possible, and especially in cold situations, keep the hives as warm as possible by narrowing the entrances, so as to diminish the indraught of wind, and cover them up with carpet or straw coverings to prevent loss of heat. Of course we must open the entrances as the season advances, and allow the bees as they grow in numbers every facility for speedy and easy ingress and egress, more particularly so in hot weather.

Simultaneously with the increase of the population by the addition of ekes to the hive below, space for honey-storing should be given above in supers. These should be not more than 4 or 5 inches deep at first; but they can be enlarged as they get filled by affording ekes of the exact length and breadth of the super, say 3 or more inches deep. They can be easily secured to the super (as to the hive below) by a few hooks and eyes. This method of enlarging the super is far preferable to the usual plan of introducing an entirely new super, which often puzzles the bees and delays their working, besides tending to the formation of swarms. Of course I am here supposing that honey is the principal object of the bee-keeper. It matters little whether hives of wood or of straw are used, ekes of either material can be used at pleasure.

All material necessary for the sake of working the apiary to the best advantage should be prepared at once, such as hives, supers, boards, &c. It saves a world of trouble and confusion to be prepared beforehand. Take care also to sweeten all hives, new ones especially, by exposing to the air a month before use. Many valuable swarms have been lost by inattention to this necessary rule.—B. & W.

BEE AND HONEY EXHIBITIONS OF 1875.

It is, I think certain, that there will be an annual exhibition at the Crystal Palace in the month of September. I have been told that the apiarian fête there will come off about the 20th of the month this year. I have heard that there will be a bee and honey show in Glasgow about the 8th of September, and that £40 will be offered in prizes. In connection with the fruit exhibition at the Manchester Botanical Gardens in the first week of September there will be another apiarian fête. I called there the other day, when I was told that the Society would give £25 if the bee-keepers would raise £25 more, thus making a sum of £50 to be offered as prizes.

We hear of many small places offering prizes for bees and honey in connection with floral exhibitions; but the Crystal Palace, the Manchester, and the Glasgow Shows will, we trust, do much to popularise bee-keeping.

We shall probably hear of Dundee, and Aberdeen, and perhaps Exeter following the example of the larger towns. The interest taken in bees and bee-culture is increasing very fast. As to the Manchester fête I have of late been so much engaged that I have had no time to see any of my neighbours or consult them about a schedule of prizes. As soon as one can be drawn up it will be sent to the *Journal of Horticulture*, and other publications for insertion.—A. Pettigrew.

LIGURIANS v. BLACK BEES.

I am at a loss to see any need of such a trial between Ligurians and black bees as suggested by Mr. Pettigrew. Why should not each apiarian follow his taste and keep the variety he likes best? As to the fancy for Ligurians dying out, this is quite a mistake, at present at any rate; for I am in a position to know that many hundreds of English stocks are annually ligurianised, and that this breed is increasing in both north and south very rapidly.

The results of experience with Ligurians have been so often recorded, and almost without exception favourably, that it seems to me superfluous to keep telling the same tale over and over again. The importers of Ligurian queens in London last autumn had so many orders that many remained unexecuted, and I have no doubt the demand this summer will be still greater. I never heard an instance of a bee-keeper who had adopted Ligurians to any extent afterwards abandoning them for his old friends. Mr. Pettigrew has, he says, not tried Ligurians, therefore from his own experience he is not competent to judge, and the most that can be said against them appears to be that they are better breeders but not better honey-gatherers. Hundreds of bee-keepers will affirm they are better in both respects; but admitting the first, I am at a loss to know how the other can but follow.

Mr. Pettigrew himself is a great advocate for strong stocks and rightly, as a hive with 60,000 bees is much more likely to produce a large harvest than two of 30,000 each. If, therefore, a Ligurian queen will breed three bees while a black queen is breeding two, it follows that more work will be done.

The most profitable bee-keeping in the world is probably carried on in America, where it is followed as a business by many people. There a man's harvest in honey is reckoned by tons and tens of tons. One bee-keeper last year made $30,000 by the sale of 67 tons of that sweet produce. Many bee farms muster one thousand and even two thousand stocks; and so well is the superiority of the Ligurian variety appreciated that it is generally cultivated—the importance also of never leaving a stock without a fertile queen (as is the case after the natural swarming) results in a very large business being done by dealers in supplying such bee-farmers with fertile queens ready at need.

In a number of the "National Agriculturist" now before me I find no less than twenty-eight advertisements from breeders and importers of Ligurian queens; as much as $6 being priced for fertile Ligurian queens. Business is also done in selling Ligurian bees' eggs for queen-breeding, and for this purpose the combs containing eggs are cut into strips, packed in little boxes with a number of bees to keep the eggs warm, and then dispatched far and near by mail for use in nucleus hives. I do not see why this plan should not be adopted in England as well as the distribution of ripe queen cells, although the disadvantage would occur of uncertainty as to pure impregnation. Where the would-be queen-breeder has the advantage of a Ligurian apiary near him his chance of success would be very much increased, but in my opinion even a cross-bred stock is more valuable than pure blacks.

I think bee-dealers here are wronged when it is insinuated that the praise of Ligurians are sung for the mere purpose of

extorting high prices for fancy stocks. It might be retorted that other dealers decry Liguriana as they have only black bees for sale. It is not forgotten that the very old apiarian and poet Virgil says—

"The better brood, unlike the bastard crew,
Are marked with royal streaks of shining hue."

—John Hunter, *Eaton Rise, Ealing.*

THE CANDYING OF HONEY.

The results of experiments made in America on this question which are quoted in the Journal are very interesting. In writing on crude honey some time ago it was said that it never candied. This statement is not absolutely correct, for the crude honey obtained last year in June or July candied this year in February. It was an exceedingly fine sample of pure nectar or crude honey which had been subjected to a long process of evaporation. Almost all our apiarian visitors last autumn tasted it, and said it was quite different from real honey. When it was found crystallised it was tasted, and then melted into its former liquid state. After all it was nothing but crude honey, smelling and tasting more like the nectar of flowers than real honey.

Hitherto we have not met an instance of crude honey crystallising. Now that we have seen one it is but right to withdraw the statement that it never candies. While we withdraw the statement alluded to, our views and opinions on the question of crude honey are strengthened and confirmed by the very experiment which has enabled us to see that it is possible to solidify or candy crude honey.

Everyone should know that candied honey is easily melted or liquified by heat, and is quite as good afterwards as before. The honey from some kinds of plants candies much sooner than the honey from other kinds, and the crystals of some kinds are much larger than the crystals of other kinds.—A. Pettigrew.

ITALIAN BEES.

I extract the following from the American "Bee-keepers' Magazine" for January last. The writer says:—"I have been breeding three-fourths Italian blood—viz., hybrid queen mated with Italian drones, and am much pleased with them. They are docile, industrious, and finely coloured. . . . I am not only convinced that Italians are worth more than their cost, but my old fogey neighbours are also, as all unite in ascribing my wonderful success to the breed of bees I keep." His report for the year 1874 is as follows:—"I took seventeen swarms from the pit March 17th in good order. I increased during the season to twenty-five stocks. I took 200 lbs. of fruit-blossom honey, 1500 lbs. clover, and 450 lbs. golden-rod honey, all with the extractor, and all excellent honey, except the first 50 lbs., which was thin and strong." Here is 2150 lbs. of honey from twenty-five stocks—that is, on an average, 86 lbs. per hive.—B. & W.

OUR LETTER BOX.

Bone Dust for Chickens (*A. H. M.*).—The bone dust used for manuring is quite as good as any other.

Books (*L. M. S.*).—The price of the book you mention is 3s. 6d., and is published by Blackwood & Sons.

Direction (*D. H. W. F.*).—Mrs. Cheshire, Avenue House, Avenue, Acton, Middlesex.

Guinea Pigs (*A Very Little Boy*).—They will eat all the fresh vegetables that Rabbits eat; lettuce and cabbage leaves, and slices of carrot. They are especially fond of parsley and apples.

Canary Breeding (*Blue Bell*).—We imagine you have selected a pair of Canaries to breed from, and that by this time they are paired or are pairing. If thoroughly paired place them in a roomy clean cage furnished with food, materials for building with, a nest box or basket, and all will go on well no doubt; at least we hope so. Some breeders scarce ever prepare their birds by pairing them before placing them in the breeding cage or compartments; then much squabbling and turbulence ensues until one or the other becomes subdued. In most instances, however, the temporary fits of fretfulness terminate in harmony and love. When "Greek meets Greek" and the "tug of war" appears endless, the pair must be separated. Keep your birds well at all times, but more particularly before they begin to breed, letting the pair have chopped egg, and bun or bread crumbs, and green food, which will much encourage the male bird to feed the hen. The same kind of food may be continued during breeding time, care being taken that a supply be in readiness to feed the young with when chipped. Examine carefully the eggs in the nest, when they have been sat upon for six or seven days, to see if they appear dull or of a leaden hue. Always lay hold of an egg lengthways; if the eggs appear transparent against a strong light they will be useless, and with the nest must be removed. Time will thus be gained in recruiting the hen for again going to nest. Hens vary in temperament. Some are as easy as an old shoe, and will allow you to pry about their nesting operations, and examine their eggs and young without becoming discomfited thereby; others will forsake either eggs or young if meddled with. After a hen has completed her nest and commenced to deposit therein her eggs, remove all superfluous building materials, clean and scrape the cage bottom, and after supplying it with grit sand, let the cage so remain during the sitting and chipping of the eggs, which latter will take place on the thirteenth day from the commencement of sitting. Clean the cages well out when the young are about ten days old, and again before the hen begins to sit her next lot of eggs. During building the hen would be much benefited with an occasional bath, a supply of green food, and some old crushed mortar or chalk. It is a good plan to make your birds familiar with you before breeding time, and then any little prying curiosity on your part will not so much disconcert them. Our plan is when we examine either eggs or birds to leave a sprig of fresh green food entwined in the wires at the end of the perch. This at once takes the birds' attention, and leaves the impression that your interference was for the purpose of supplying them with food. We could enlarge upon our own ideas of treatment to "Blue Bell," who stated she is a beginner, but space will not now permit, therefore we should advise her to purchase a treatise upon Canary-breeding for general plan of operations, which with her own knowledge will guide and fortify her with many of the ins and outs appertaining to Canary-breeding and keeping. We can reply to other questions in future issues.

Honey Cakes (*C. J. R.*).—Mix a quart of strained honey with ½ lb. of powdered white sugar, ½ lb. of fresh butter, and the juice of two oranges or lemons. Warm these ingredients slightly, just enough to soften the butter, and then stir the mixture very hard, adding a grated nutmeg. Mix in gradually 2 lbs. or less of sifted flour, make it into a dough just stiff enough to roll out easily, and beat it well all over with a rolling pin; then roll it out into a large sheet half an inch thick, cut it into round cakes with the top of a tumbler dipped frequently in flour, lay them in shallow tin pans slightly buttered, and bake them.

Parrot Self-plucking (*F. M.*).—It is supposed to be to allay an itching of the skin, caused by the bird having bones and other unnatural food given to it, and to the want of exercise. Fruit and other vegetable food only, no hempseed, and a shower bath of tepid water daily, are the best remedies. The water may be applied through the rose of a watering-pot. If this does not put an end to the self-plucking, have a cradle made as shown by a woodcut in our twenty-fifth volume.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.
Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. March.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 24	30 369	39.4	37.4	W.	39.1	53.4	31.2	65.7	30.5	—
Th. 25	30.376	45.3	43.4	W.	40.3	56.6	38.8	98.2	36.6	—
Fri. 25	30 241	49.5	45.0	S.W.	42.0	56.3	44.4	94 4	41 6	—
Sat 27	30.089	45 0	41.0	N.W.	42.0	55.8	37 5	106.2	34 5	0.015
Sun.28	30 206	42.1	37 0	N.	41.9	47.8	34 9	96.5	33.0	—
Mo. 29	30.459	43.8	41.3	W.	41 2	53.2	37.2	91.3	33 2	—
Tu. 30	30 483	48 2	45 5	N.	42.0	55.6	42.9	82.2	40.1	0.010
Means	30.318	44.8	41.6		41.2	54.1	38.6	90.6	35.7	0.025

REMARKS.

24th.—A rather dull day, but warmer and more pleasant than the preceding one.

25th.—A fine day throughout, and much warmer, especially towards night.

26th.—A very beautiful morning, the after part fair and warm but dull.

27th.—Very fine morning; cloudy at noon; fine afternoon, but a slight shower between 5 and 6 P.M.

28th.—Squall very early; fine morning; dull noon; then bright for two or three hours; but dull after 4 P.M.

29th.—Fine till noon, then becoming rather dull, occasional sun, but a rather dull though fair day.

30th.—Fine morning, very bright at times, and pleasant all day.

Though the wind has changed to the west, and the temperature has risen about 5° this week, its general character has been very similar to its predecessor, being dry and fair, but with only short bursts of sunshine.—G. J. Symons.

COVENT GARDEN MARKET.—March 31.

The influence of the holidays has had its effect here, the markets not being so well supplied this week, or yet so good an attendance of buyers; the trade having bought pretty freely on Saturday is no doubt the cause of their absence. Importations have also been light, and, with the exception of consignments from Paris of salading and Asparagus, offers no cause for remark.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples ½ sieve	2 6	to 3 6	Mulberries lb.	0 0	to 0 0
Apricots dozen	0 0	0 0	Nectarines dozen	0 0	0 0
Cherries lb.	0 0	0 0	Oranges ℔ 100	8 0	12 0
Chestnuts bushel	10 0	20 0	Peaches dozen	0 0	0 0
Currants ½ sieve	0 0	0 0	Pears, kitchen dozen	2 0	3 0
Black do.	0 0	0 0	dessert dozen	8 0	12 0
Figs dozen	0 0	0 0	Pine Apples lb.	2 0	6 0
Filberts lb.	0 0	0 0	Plums ½ sieve	0 0	0 0
Cobs lb.	1 5	2 0	Quinces dozen	0 0	0 0
Gooseberries quart	0 0	0 0	Raspberries lb.	0 0	0 0
Grapes, hothouse lb.	12 0	20 0	Strawberries ℔ oz.	2 0	3 0
Lemons ℔ 100	8 0	12 0	Walnuts bushel	8 0	12 0
Melons each	0 0	0 0	ditto ℔ 100	1 0	1 6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes dozen	3 0	to 6 0	Leeks bunch	0	4 to 0 0
Asparagus ℔ 100	8 0	12 0	Lettuce dozen	1 0	2 0
French bundle	15 0	20 0	Mushrooms pottle	0 9	2 0
Beans, Kidney ℔ 100	2 0	3 0	Mustard & Cress punnet	0 2	0 0
Broad bushel	0 0	0 0	Onions bushel	3 0	6 0
Beet, Red dozen	1 0	3 0	pickling quart	0 6	0 0
Broccoli bundle	0 9	1 6	Parsley doz. bunches	3 0	8 0
Brussels Sprouts ½ sieve	3 0	4 0	Parsnips dozen	0 9	1 6
Cabbage dozen	2 0	3 0	Peas quart	0 0	0 0
Carrots bunch	0 6	0 8	Potatoes bushel	2 6	5 0
Capsicums ℔ 100	0 0	0 0	Kidney do.	3 0	6 0
Cauliflower dozen	4 0	8 0	Radishes doz. bunches	1 0	1 0
Celery bundle	1 6	2 0	Rhubarb bundle	0 9	1 0
Coleworts doz. bunches	5 0	8 0	Salsafy bundle	1 6	0 0
Cucumbers each	1 0	2 0	Scorzonera bundle	1 0	0 0
pickling dozen	0 0	0 0	Seakale basket	2 0	3 0
Endive dozen	2 0	0 0	Shallots lb.	0 3	0 4
Fennel bunch	0 3	0 0	Spinach bushel	0 0	4 6
Garlic lb.	0 6	0 0	Tomatoes dozen	0 0	0 0
Herbs bunch	0 3	0 0	Turnips bunch	0 6	0 0
Horseradish bundle	0 0	4 0	Vegetable Marrows doz.	0 0	0 0

WEEKLY CALENDAR.

Day of Month	Day of Week.	APRIL 8—14, 1875.	Average Temperature near London.			Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	h. m.	h. m.	h. m.	h. m.	Days.	m. s.	
8	Th	Royal Society at 8.30 P.M.	56.1	35.8	46.0	22 af 5	42 af 6	5 af 6	26 10	2	1 52	98
9	F	Literary and Artistic Society at 7 P.M.	55.0	35.3	45.2	19 5	44 6	31 6	57 11	3	1 35	99
10	S	Royal Botanic Society at 3.45 P.M.	55.9	33.5	44.7	17 5	45 6	7 7	morn.	4	1 18	100
11	Sun	2 Sunday after Easter.	56.0	35.2	45.6	15 5	47 6	59 7	18 1	5	1 2	101
12	M	Royal Geographical Society at 8.30 P.M.	55.8	36.4	46.1	13 5	49 6	7 9	18 2	☽	0 46	102
13	Tu	Royal Medical and Chirurgical at 8.30 P.M.	55.6	33.9	44.7	10 5	50 6	26 10	1 3	7	0 31	103
14	W	Society of Arts at 8 P.M.	57.0	36.1	46.6	8 5	52 6	48 11	29 3	8	0 15	104

From observations taken near London during forty-three years, the average day temperature of the week is 55.9°; and its night temperature 35.2°.

THINNING GRAPES.

MANY an amateur must have looked at his bunches of Grapes in bewilderment immediately after the flowers have fallen, when the berries are little larger than a pin's head, and so closely packed that it seems impossible to cut one away without damaging the rest, and while he looks and wonders and waits for advice, they rapidly swell to the size of a pea, and every hour the task before him becomes more difficult. Grapes swell so rapidly at first, and every day they are left unthinned takes so much away from those which are to be finally ripened, that it would be well to get a little theoretic knowledge of thinning before the time comes for actual practice.

Rules cannot be laid down for thinning perfectly every bunch of Grapes, but every large practitioner has rules—it may be unknown almost to himself—by which he invariably begins thinning, and beginning well is more than half the battle. Thinning Grapes is not at all difficult when the operator can once see clearly before him what it is that he intends doing and begins methodically to do it. On the other hand, if it is haphazard work—if he merely begins by cutting out berries where they are thickest, then leaving them for a time to see if they are likely to be too thick again, going over a bunch three or four times at intervals of several days, he will make himself a large amount of needless labour, and, after all, the bunches will not be satisfactory.

I will mention (from memory) what I consider the principal points whereby to judge a bunch of Grapes, and name them in the order of their relative importance, when it will be seen at a glance that considerably more than half depends on the time and manner of thinning.

1st, Evenness of berries as to size. 2nd, Regularity of berries as to distance apart, and whether they are just so close that they will neither crush each other nor fall about loosely when the bunch is handled. 3rd, Colour. 4th, Bloom. 5th, Size of berries. 6th, Form of bunch. Last and least, Size of bunch.

Now the 1st, 2nd, 5th, and 6th of these points (supposing the Vine to be in a healthy condition) depend entirely on the thinning. All the other points are also liable to be affected by it, the 3rd and 7th by not thinning early and sufficiently, and the 4th by rough handling.

Thinning should be done as early as possible after the berries commence swelling, which is from ten days to a fortnight after the first flower opens. By this time, if the Vines are vigorous, the branchlets which bear the berries on the upper portion of the bunch will have raised themselves so as to be at right angles with the main stem of the bunch. Supposing there is a good set, it is these branchlets I commence operations on by cutting away unflinchingly every berry from the under side of them; I mean the side nearest to the point of the bunch. Next, all undersized berries are cut out; these have not been properly fertilised, and will only disappoint if left in. The centre of the bunch as soon as it can be done is thinned severely; and in the case of Grapes for late keeping, all berries which are not likely to be visible when ripe are cut entirely out. After proceeding thus far, if the berries are still too thick, leave, in preference, those which stand out boldly and have the most direct communication with the principal stems. The berries on the upper side of the uppermost branchlets may be left closer together than they are anywhere else; it is rarely they require thinning at all beyond cutting out imperfect berries. These branchlets in the course of growth turn up round the main stem, and if they are well furnished with berries, completely hide it and give a very compact appearance to the bunch. Do not be too particular about the berries being at equal distances apart, rather look to the berry stalks. If thinned properly thus early the berries when they swell will push each other into their proper places, if the stalks which bear them are so situated as to admit of this.

The thinning of a bunch must as much as possible be all done at one operation. The eye must be able to see prospectively the full-grown berries and the position they will take. A bunch cannot be thinned properly if it is operated on three or four times at a week's interval; at the most there ought to be only an odd berry or two to take out three or four days after the first thinning. A bunch of Grapes, like an ill-fitting garment, once cut wrongly can rarely be made perfect afterwards.

The thinning of the bunches to within one or two of the required number should take place before they come into flower, or a loss of size in the berries of the remaining ones will be the result.—William Taylor.

SPRING-FLOWERING CLEMATIS.

No one who saw the small plants of this gay class of flowers which the Messrs. Veitch exhibited at South Kensington on the 17th ult. could fail to have been struck with their extreme adaptability to conservatory and other purposes of decoration. Although well enough known in some circles how admirably the Clematis will force and bloom in a small state, the general idea is undoubtedly to regard it as a summer or autumn-blooming plant alone for growing in the open air, or if grown in pots, to consider that immense plants and large houses are indispensable to bring out its beauties. That is, beyond doubt, a very prevalent idea, and many with small houses are deterred from the cultivation of the Clematis in pots on account of their supposed want of convenience. As Messrs. Veitch's, and subsequently Mr. Paul's, plants showed, they need have no such fear, for if they have room to grow a Pelargonium or an Azalea in a 6-inch pot, they have room to grow Clematis.

No plants are more easy to force nor are more beautiful in March than these. Imagine a group in 7-inch pots, the plants from 15 to 18 inches high and a foot through, and each clothed with from twelve to twenty fine blooms of the most charming colours, and what at the time can equal them? Truly, few plants can com-

pare with them, and we do not hesitate to say that they ought to be grown as forced plants in every garden where a spring display of flowers is coveted. The flowers last a long time in beauty, and the plants are admirably adapted for room-decoration, for which no plants are more effective.

To their unquestionable beauty it is pleasant to add that they are of the easiest culture, and with ordinary care the cultivator cannot fail to succeed in having a display of a most satisfying kind.

In preparing for next season's flowering small plants which have bloomed this season should be placed in any sheltered position for a few weeks' rest. They should then be pruned—that is, have the old flowering wood cut away, and be repotted in light, rich, fibrous loam, taking care to have the pots clean and well drained. They should be plunged in the open ground, and to ensure good growth mulch the pots with cow manure, and keep the plants well watered during the summer. Choose a good position exposed to the full sun in order that the wood may be well ripened. During the month of October the plants must be removed under shelter to protect them from heavy rains. They can be trained into any desired form by a few stakes or wires; this may be done any time before forcing commences. No plants are more easy and certain to force.

They will be blooming in six to eight weeks after being placed in heat. They require a light house and an ordinary temperature of 50° at night, and 70° to 80° by day according to circumstances, but a few degrees of heat more or less is of no consequence, the plants being anything but miffy and tender.

A vinery just being started would suit them well, as the plants would be in bloom before the roof became covered with foliage. Thus those who have not a regular forcing house need not deny themselves these beautiful plants. When they are in full growth a little liquid manure should be given them, which will increase the size and texture of the blooms.

The double varieties do not flower so freely as the single, but their individual blooms are massive and fine. C. Jackmanni and its allied dark varieties will force, but will not bloom quite so early as the following, which have proved to be the best forcing varieties at present in cultivation, and should be included in all collections.

Albert Victor.—Deep lavender or light mauve colour; a very free bloomer and good.

Fair Rosamond.—Blush white, with slight red bar down the centre of each petal.

Lady Londesborough.—Silver-grey, with white filaments bearing chocolate-purple anthers; a free bloomer and excellent.

Lord Londesborough.—Rich mauve, with a maroon stripe down the centre of each petal.

Miss Bateman.—White, with a cream-coloured stripe down each petal, the stamens being of a pretty chocolate red with white filaments; an excellent variety.

Mrs. S. C. Baker.—Delicate pink, changing to French white, with a claret band down each petal; very free and good.

Lucie Lemoine (double).—White, fine; far superior to Fortunei or any other white variety.

John Gould Veitch.—Beautiful soft lavender-blue, with pale-coloured stamens.

There are many other varieties, but this short list embraces the best for early blooming whether small or large plants. Not one of them can disappoint the most exacting critic of floral beauty amongst forced flowers in March and April.—W.

THE ORCHID-HUNTER IN BURMAH.—No. 2.

Before closing the observations on the different varieties of Dendrobium formosum, it may not be out of place to note that there is an unusually magnificent variety of this plant common in the Andaman Islands, where it grows on the trees in the Mangrove swamps. These islands lie in the Bay of Bengal, almost in a line with Moulmein, and having much the same climate as that place, abound in Orchids and plants almost identical with Moulmein species.

One of the most curious of all the Dendrobiums—Dendrobium revolutum—is generally found growing on the same trees and under the same circumstances as Dendrobium formosum, and therefore claims attention in this place. This plant has the stem clothed with evergreen leaves, which grow remarkably closely together up the stem on either side. Though not allied to the nigro-hirsute Dendrobiums in some respects, it should no doubt form one of this division. It differs from them in generally bearing its flowers on the sides of the stems after the manner of the deciduous Dendrobiums. It has a very remarkable mode of growth, totally unlike that of any allied species. This peculiar manner of growth may not have been noticed; it is this, that the old stem continues at its extremity to grow for years, and it is this fact that causes imported plants to present such a straggling and ugly habit. The flower of this plant also being small, it is one little esteemed by Orchid growers. If, however, having a knowledge of the peculiar habit of this plant, the horticulturist steps in and prevents the prolonged growth of the old stem by cutting the old stems back judiciously so as to encourage new growths, he very shortly changes the plant into one of the prettiest and most noticeable evergreen Orchids in the house. Under this treatment also the plant flowers more freely; and although some may still be found to object to the dullish-white colour of the flower, most people will be attracted by the great peculiarity and distinctness of its form.

The next species of nigro-hirsute Dendrobiums, and as far as the climate and circumstances under which they grow being alike, the nearest allied to those already noticed is Dendrobium hedyosmum. To see this charming Orchid growing in masses on the trees in the country near Pegu is to see a sight not easily forgot. Pegu herself has not yet recovered from the effects of war; her town and pagoda are still in a state of ruin. In the midst of all this desolation Nature has treasured up some of her richest gems, for this district not only abounds in Orchids, some of which will be noticed hereafter, but it contains forests of Butea frondosa, next to the Amherstia the most gorgeous of flowering trees, making the whole district a blaze of flower in the spring months, and the Butea is the special abode of that splendid Fern Platycerium grande, which completely covers the stems of some of these trees. As regards Dendrobium hedyosmum it is pretty widely spread throughout this district, and also in the districts lying some sixty miles from Moulmein in the interior. The plant has a very compact habit, it produces its flowers in pairs from the top of the last growth, and in very flourishing plants throws out several flowers from the sides, towards the top of the plant also. It bears pure alabaster white flowers of waxy substance, having the labellum tinged with green and yellow, and marked in the throat with very bright orange stripes. In consequence of the great substance of the flower it keeps in blossom a very long time—over two months, which makes it an especially desirable plant. It is very easy to cultivate, and there is no Dendrobium equal to it for sweetness of scent, the perfume being very like that of Wallflowers.

Dendrobium Jamesianum is the next of the nigro-hirsute Dendrobiums worthy of observation. It is more conspicuously marked with black hairs than any of the same species, with perhaps the exception of Dendrobium infundibulum. It is commonly said to come from Moulmein. Whether it grew there formerly, and now escapes observation, or whether Moulmein enjoys the credit of its coming from the interior it is difficult to say, at any rate it cannot in the present day be found anywhere near Moulmein. In the interior, Tonghoo, Thayetinyo, Siam, and Bhamo in Western China it is frequently found. It is scarcely to be excelled by any other Orchid of this class. It lasts almost as long in flower as Dendrobium hedyosmum, it has more substance than Dendrobium formosum, with flowers very nearly as large, and the brilliancy of the colour of the lower portion of the lip is very striking, and as a whole it will always be among the most favoured of its tribe. The flower is pure white, the labellum being marked with the brightest brick red, the edge of the lip is very much fringed, and there is a rough texture in the throat.

This plant is not well cultivated by all Orchid growers, the cause probably being that the plant in its native districts is accustomed during the winter to very cold nights, with the thermometer as low as 40° in the early morning, and is accustomed to heavy dews. The plants of this Orchid in our stoves are very apt to acquire a shrivelled appearance unless carefully attended to, and it is probable that they require more moisture at the roots during the resting season than the other sorts of the nigro-hirsute race of Dendrobiums.—E. S. B.

Violets.—I beg leave to publicly thank your old and worthy correspondent Mr. Smith, late of Exton, and now at Mentmore, for not only teaching me how to grow these sweetly pretty harbingers of spring, but also with supplying me with a stock of plants. For a month past we have been gathering them by the basketful, and still they come in great profusion.

I am quite sure Mr. Smith's system would be read greedily. We all know Mr. Smith can use the pen as well as the spade, and let us hope he will favour the readers of your Journal with an exposition of his mode of growing Violets.—R. Gilbert.

ROSE TREES AND FROST.

I am sorry I cannot altogether agree with Mr. Beachey about injury done by frost to Rose trees. Old wood, no doubt, may be enfeebled by encouraging the growth of young wood from the base, but it will not account for the frost killing old wood still strong and vigorous, and producing young wood from the ends of its shoots as strong as that springing from the base. Moreover, in 1860 I lost ninety-eight standards out of one hundred, where the system of pruning, consequent on their being standards, was precisely such as Mr. Beachey describes, no suckers being allowed from the base of the Briar, and the heads pruned to form symmetrical bushes.

In the case of the Maréchal Niel I referred to, the young growth at the base was quite recent, and the strength of the main stems, shoots, and branches quite unimpaired. It would be scarcely possible, I think, to see more vigorous or healthy growth, the tree having in the course of four seasons covered a wall 20 feet long and 8 feet high. The young shoot from the base sprung up at the end of August owing to a redundance of sap, but it certainly could not have impaired the strength of the main stem, which was nearly 2 inches in diameter, and many shoots on the extremities of the branches were quite as strong and thick as this succulent one at the base, and I feel confident if Mr. Beachey were to see it he would agree with me.

As to the comparative merit of the two systems of growing Roses, one of which produces quality, the other quantity, there will always be differences of opinion.

Having a fair amount of Rose trees—not to be reckoned by the thousands as some amateurs, but between seven and eight hundred—I prefer to be able to pick for my drawing-room during the Rose season from thirty to fifty really choice blooms every day fit for an exhibition table. There is no way, as a rule, one enjoys Roses so thoroughly as when cut and arranged in specimen glasses or in suitable vases, and one really good Rose is, in my opinion, worth twenty inferior ones; but, as I said before, this will always be more or less a matter of taste.

As to the question of the maturity or immaturity of shoots there seems to be also great diversity of opinion. I cannot accept the fact that young green shoots are as mature as older shoots that have stood a whole summer's sun and winter's cold, nor do I see sufficient evidence that the strong growths of two and three years have been injured sufficiently by the younger growth from the base to account for the action of the frost. I find the inner pith in the old shoots more injured than the inner pith in the young, and I find old wood injured where, owing to the strength of the shoots, no young wood had been allowed to grow from the base. That sap, like water, may be a non-conductor of heat is, no doubt, partially true, but in such a severe frost as we had last year every particle of sap would be frozen; so the question still remains, Why is the cellular tissue more injured in the old shoots than the young? I am very much obliged to Mr. Beachey for his remarks, and as I, as a general rule, quite agree with what he has at different times written in the *Journal of Horticulture*, and in his estimate of Roses, I am sorry I cannot agree with him now; and till someone else can bring some other suggestions to bear, am still inclined to believe that the effect of frost on cellular tissue is very mechanical, and that the younger wood, with softer pith, and less indurated bark, has more power of expansion, so that the cell walls are not burst by the expansion of the sap. Other plants, such as Delphinium formosum, can stand an immense amount of cold when in their young state, but which die in autumn with a much less degree of cold.

I must thank "Cornubia" for his letter, especially as he agrees with what I said under the initials "C. P. P." I think he hails from the sunny south, and not from a climate like mine, where Tea Roses are killed to the ground every winter, and Céline Forestier has to push afresh from the base nearly every year. I can, however, quite enter into his enthusiasm for the true Perpetuals—the Teas, where they can be grown. Centifolia Rosea is a very favourite Rose with Mr. George Paul, and he has sometimes shown it splendidly, but I never could feel any enthusiasm myself for it, as its beauty soon fades away under either a summer's sun, or two hours in a hot tent; the petals are much too flimsy. Etienne Levet was certainly grand last year, and I have great hopes of François Michelon, but I cannot say any new varieties I saw last year impressed me greatly.

I must acquit Mr. Radclyffe of never having recommended Prince Camille de Rohan, as I remember at one time it used to be a favourite of his; but why it was discarded for Empereur de Maroc, Baron Chaurand, Maxime de la Rocheterie, and others like these, I fail yet to understand, any more than I can understand why he refuses to see the merits of La France and Marie Baumann. I am somewhat inclined to think that Mr. Radclyffe does not see enough of other persons' Roses as well as his own, and that when once he has issued a verdict in favour of a Rose he does not like to alter it afterwards, and so Edouard Morren and Felix Genero will remain amongst his select Roses for some time to come. I agree with "Cornubia," an election such as that conducted by Mr. Hinton ought to give every amateur a good and safe guide to select from, and it surprises me that so many should still write to the *Journal of Horticulture* for lists of Roses.—C. P. Peach.

THE GREAT HORTICULTURAL SHOW AT ANTWERP.

(*From our Special Reporter.*)

The hundred and twenty-fifth Exhibition of the Royal Horticultural and Agricultural Society of Antwerp was held in that city from the 4th to the 7th of this month. The locality chosen for it was the spacious suite of buildings belonging to the Société Royale d'Harmonie, and for an indoor exhibition we never saw anything better done. There is a diversity of opinion as to whether plants look better in a large well-lighted building or in a tent; each has its advocates. And then there is the other aspect of the question—whether an exhibition confined to one large space which may be all seen at once, or one which is distributed over several apartments, is most satisfactory. No doubt the effect produced by the former is very striking when first seen, but it soon passes off; while in the latter case the interest is kept up in passing from one part to another, each furnishing its own special and varied interest. It was so in this Exhibition at Antwerp. A great hall, very much larger than St. James's Hall in London, but arranged much in the same way, with spacious galleries on either side, was filled most tastefully with groups of flowering and fine-foliaged plants, and this was the chief part of the Exhibition; but there were smaller halls and apartments, which were devoted to smaller subjects than those exhibited in the large one.

The centre of attraction was, of course, the large hall. The centre of the floor was occupied with three large groups of Azaleas, which were masses of bloom, and were grown in a hemispherical shape. They were handsome healthy plants, but there is the same objection to them that used to be urged against the large specimens grown in England, and which were so long the chief attractions at our exhibitions—that they are too stiff and artificial, and wanting the grace and freedom of plants allowed to grow more naturally. The corners of the hall were filled with large specimens of Palms, Tree Ferns, Cycads, Dracænas, and other ornamental-foliaged plants. Those who seemed to contribute most to the decoration were Madame Le Grelle d'Hanis, M. de Ghelliuck de Walles, M. Van Houtte, M. Vervaen, M. Charles Van Geert, and others. At the extreme end of the hall was a group of Camellias, the most extraordinary plants we have ever seen. They were from 18 to 24 feet high, and none of them more than 2½ feet through. They were remarkably well grown, full of health, and covered with bloom. These plants are seventy years old, and the gentleman who propagated them was present in his eightieth year to testify to the truth of this statement. They are exhibited by M. Edmond Le Grelle. The Camellias generally, of which there were numerous groups distributed over the Exhibition, were well grown.

Under the galleries we remarked some good exhibitions. Among them a wonderful collection of Aralias from Madame Le Grelle, a group of ornamental-foliaged plants from Baron Osy de Wychen; a group of Agaves, Bonaparteas, and Liliads from M. Beaucarne; and well-grown plants of Camellias from M. Jean Vervaen and M. Vuysteke. In the gallery on the right the first object which attracts attention is a pretty lot of Azalea indica, exhibited by M. de Ghelliuck, which for fine cultivation were not excelled in the Exhibition. Among the most striking were Comte de Flandre, Punctulata variegata, Eclatant, Magnifica, Charmer, and Grande Duchesse de Bade. Occupying the corner opposite there was a fine collection of thirty Hollies, fine large specimens in baskets, exhibited by M. Charles Van Geert of Antwerp, and they unanimously received the first prize, as they well deserved. Among them we observed a very pretty species called crenata, with small leaves of the size and shape of the dwarf edging Box. In the corresponding corner opposite M. Van Geert had a collection of thirty large Conifers, specimens of perfect cultivation, which

received the first prize of a framed silver-gilt medal. In a collection of variegated plants exhibited by M. Hillegeer of Beveren we observed a purple-leaved Peach, which if introduced to shrubberies would form an object of interest and produce a good effect.

Generally speaking, the Camellias were very fine well-grown plants in rude health and abundance of bloom. Where, if not in Belgium, can we expect to see such Camellias exhibited, where they form an article of such extensive commerce? Belgium is as much the home of the Camellia and Azalea as Holland is of the Hyacinth and the Tulip. Those who were most successful in the classes for Camellias were M. Ed. Le Grelle already mentioned, who received the framed gold medal, or three hundred francs, for his tall specimens; and M. Jean Vervaen of Ledeberg was second with some well-grown bushy specimens, which obtained the framed silver-gilt medal. The other successful exhibitors in the other classes were M. Beaucarne, M. Joseph De Coster, and M. Louis Van Houtte.

Azaleas, as a matter of course, we expected to see in their perfection at a Belgian show, and we were not disappointed. We have already referred to the great groups that were on the floor of the hall, and these were contributed by M. de Ghellinck de Walle of Ghent, whose splendid group of thirty carried off the first prize of the framed gold medal, value 400f.; and the second prize of a gold medal of 200f. value was awarded to M. Jean Vervaene. M. de Ghellinck was again successful in the collections of fifteen plants, and obtained the gold medal value 200f., while M. Beaucarne was second. For the finest specimen M. de Ghellinck was again successful.

Rhododendrons were well represented. Orchids were very sparingly exhibited. Amaryllises were shown by M. Van Houtte of Ghent, M. Van der Linden of Antwerp, M. Louis Eeckhante of St. Denis-Westrem. M. Van Houtte took the first place in every instance, but we could not but remark that the style of flowers cultivated in Belgium would not find favour with us in England, in consequence of their narrow-pointed petals, which contrast unfavourably with the fine, stout, flat, and broad petals of our English strains—those sent out by Messrs. Veitch and Mr. B. S. Williams for instance.

Hyacinths and Tulips were much fewer in number than one might have anticipated. The season here as well as with us is unusually late, and no doubt the fewness may be attributable to this cause. But it did not prevent Messrs. Krelage & Son of Haarlem coming forward with a very fine exhibition of a collection of one hundred varieties. They were in good condition, with long, stout, densely-bloomed spikes, and worthily received the gold medal or 200f. For a collection of fifty Tulips, single flowers, Messrs. Krelage were again first. Cyclamens were well represented by Madame Jean Everaerts of Antwerp, and M. Van Houtte. The exhibition of the former was a fine collection of twenty-five varieties of Cyclamen persicum, which reminded one of the same plants as are exhibited at South Kensington. They were examples of superior cultivation and worthily received (*à l'unanimité*), the first prize of a silver-gilt medal. M. Van Houtte's collection comprised principally hardy species, such as Atkinsii, ibericum, hybridum, carneum, &c.

Forced Roses in pots were here, as they always are at our own exhibitions, objects of attraction and admiration. The great gold medal offered by the Queen was very appropriately given for the queen of flowers, and the successful candidate was M. A. A. Peeters, St. Gelles, near Brussels. These were all standards and shown in a close group forming a mass of green foliage with the flowers standing well above it. Being standards they came up well to the eye. The second honour fell to Madame Jean Everserts for a lot of remarkably well-grown plants, which for vigour and luxuriance of foliage surpassed all the other collections. These were dwarf plants of large size on their own roots, well bloomed, and in greater variety of colour than the last-named collection.

Palms were well represented, and the gold medal or 500f. for the collection of twenty was carried off by Madame Le Grelle D'Hanis, and they were certainly very fine. Madame Le Grelle was also successful in obtaining the large gold medal offered by the King for a collection of twenty Marantas, which filled the whole of the extreme end of the smaller hall. For ten ornamental plants of different kinds Madame Le Grelle was again successful in carrying off the gold medal, and Baron Nottebohm of Antwerp was second, both having obtained their awards as the prize list says *par acclamation*.

In speaking of the gallery on the right we omitted to notice a very rich collection of Ivies in pots shown by M. Charles Van Geert, which received the silver gilt medal *par unanimité*.

The most charming plant in the whole Exhibition, and that which attracted most attention as a novelty, was a seedling Bertolonia exhibited by M. Van Houtte of Ghent, having in its venation one of the most beautiful pieces of colouring to be met with in the vegetable kingdom. The leaves of the plants, which are shown in fine condition under bell glasses, are 6 to 7 inches long, and about half as broad as they are long, of a dark brownish-green ground, relieved with veins of bright aniline purplish pink. This is sure to become a popular plant in England.

It would be impossible, or at least not profitable to our readers, for us to notice the exhibitions that were made in every class. We have cursorily gone over the leading collections and given a general sketch of the Exhibition. We will now conclude by noticing a collection which attracted much attention in the Exhibition, which was brought by our own enterprising countryman Mr. B. S. Williams of Upper Holloway. This occupied the whole of one division on the side of the smaller hall, and consisted chiefly of new and rare plants in bloom. They were not entered for competition, and consequently no prize was awarded, yet Mr. Williams had the satisfaction of knowing from every evidence that his contribution to the Show was highly valued.

The gold medals of honour of the value of 300f. each, one for the exhibitor living within and the other for the exhibitor living without the Arrondissement of Antwerp who had contributed most to the embellishment of the Exhibition, were respectively awarded to Madame Le Grelle D'Hanis and to M. Louis Van Houtte.

After the opening of the Exhibition a grand banquet was given to the Jury in the hall of the Flemish Theatre. The chair was occupied by the excellent President of the Society, Baron de Caters, whose father was president before him. On his right were the Burgomaster of Antwerp, Dr. Hogg, the Burgomaster of Ghent, M. Krelage, M. Kegeljan, and Professor Morren. On his left were M. de Cannart d'Hamale, M. Ronnberg, M. de Ghellinck de Walle, Vicomte de Forceville, M. Alph. de Cock. Among the guests were representatives of all the gardening nationalties, such as Mr. B. S. Williams of London; Vilmorin & Thibaut of Paris; Dr. Mulder, Mr. Van Lennep, and Mr. Willink from Holland. This was one of those sumptuous entertainments with which we have been made familiar by visits to Ghent and to Brussels; and we can only say that Belgian hospitality appears to be universal, for the reception we met with at Antwerp was a repetition of those which had already won our hearts years ago, and which have caused them to beat responsively in sympathy with the Belgian people.

ROYAL HORTICULTURAL SOCIETY.

April 7th.

No fruit was submitted for judgment in the Council-room on this occasion.

Floral Committee.—R. B. Postans, Esq., in the chair. Not extensive but interesting groups of plants were staged at this meeting. Messrs. Veitch sent a very attractive collection, comprising three distinct Crotons, which had been received from A. H. C. Macaffee, Esq., of Sidney—viz., C. Disraeli, with foliage of great substance, and reminding one by its bold, rigid, and curiously-divided leaves of the Platyceriums. In colour it is deep green with yellow bands. It received a first-class certificate. C. Lord Cairns is similar in colour, and C. variabilis exhibits a mixture of pink, green, and buff. The same firm sent Anthurium violaceum, a dwarf variety with good dark green foliage and clusters of berries, arranged after the manner of a miniature head of Maize, but pendant, and of a delicate lavender violet colour. It received a botanical commendation. Spathiphyllum Wallisii, an Anthurium-like plant of vigorous habit, and showing several spathes, one of which is expanded; it is ivory white in colour. Croton appendiculatum, a remarkable green variety of dwarf habit; from the extremity of each leaf is subtended, by a delicate filament of 1 to 2 inches in length, another or sub-leaf, which renders the plant very distinct and curious. Croton tortile, a spiral-foliaged form, of great substance and of dark metallic hue. Dracæna Hendersoni, a plant having the elegant habit of D. Cooperii, with leaves of a singular yet not irregular mixture of colours—white, pink, green, and brown being closely blended. Interesting Droseras—viz., D. dichotoma and D. spathulata (first-class certificate), Darlingtonia californica, Cephalotus follicularis, and Sarracenias, purpurea, psittacina (vote of thanks), and Stevensii; also Drosophyllum lusitanicum, which had a botanical commendation. These were in remarkably good order, and were exceedingly curious and attractive. Messrs. Veitch also sent Camellia Mathntians rosea, a very free bloomer and good; and Hyacinth e'na (first-class certificate). This is a semi-double variety of fine substance of petal and of a glowing salmon pink colour. It is very bright, and promises to hold high rank amongst the best of its class.

Mr. Bull sent a plant of Crinum brachymena with two spikes surmounted with a dozen flowers, a small Odontoglossum Roezlii, Dracænas insignis (dark), and candida, which has a large proportion of ivory white in its foliage—both these had first-class certificates awarded; they are distinct in colour, excellent in habit, and stout in texture of foliage. Mr. Bull also sent a small plant of the curious Masdevallia amabilis.

Mr. B. S. Williams sent a plant of the graceful Palm Geonoma gracilis; a plant also of the prickly-stemmed Palm, Martinezia erosa—both had first-class certificates; also a nice Orchid,

Warscewiczella discolor, with four very richly coloured flowers; Eurycles Cunninghami, resembling a miniature Crinum, it had a stem 18 inches high surmounted with a corona of white Narcissus-like flowers; and Pteris Williamsi, a distinct Fern of robust habit with two shades of green in the fronds.

Paul & Son, Cheshunt, had a standard plant with five blooms of the fine Rose Hippolyte Jamain; also a box of cut Roses, of which the best were Annie Laxton, Etienne Levet, and Captain Christy. A standard plant of Comte de Sarenyi was also exhibited. It is a Rose of the type of Marguerite de St. Amand.

From Mr. Perkins, the Gardens, Thornham Hall, came a box of splendid blooms of Maréchal Niel, and received a vote of thanks.

A basket of very fine Primula sinensis, Fern-leaved, of robust growth and deep carmine blooms, was sent by Mr. Eckford, Coleshill Gardens, Highworth, who sent also finely-laced blooms of Polyanthus; a vote of thanks was awarded.

Mr. Dean contributed a very showy and attractive group of hardy spring-flowering plants, comprising a fine variety of Aubrietia with deep violet flowers, named A. Eyrei; Pansies, Yellow Boy and White Swan, a great variety of Primroses, and a charming margin of Myosotis dissitiflora. Most of these Primroses are admirably adapted for frame culture, and, some of them being distinct, are spring bedding plants. The group consisted of single and double varieties, both selfs and laced, and ranged in colour from pure white to a deep blood crimson. They well merited the vote of thanks which was awarded.

G. F. Wilson, Esq., F.R.S., sent plants of Alpine Primulas—P. pulcherrima, a beautiful variety, like a globular and gigantic truss of Verbena on an exceedingly stout stem; and P. viscosa, of a closer habit of growth.

A splendid plant of Dendrobium nobile, 4 feet high and through, carrying many hundreds of fine blooms and an abundance of healthy foliage, was exhibited by Mr. F. Moore, gardener to W. C. Pickeregill, Esq., Blinden Hall, Bixley, and had worthily attached a cultural commendation; also an equally splendid plant of Dendrobium densiflorum, with twenty-four fine spikes, from Mr. J. Staples, gardener to Mrs. Candy, Chipstead Place, Sevenoaks, had also a cultural commendation. Both these specimens bore unmistakeable impress of excellent culture. From the Society's gardens were densely-bloomed plants in pots of the small light Clematis C. montana.

MY HOME PLOT.

Mine is emphatically a cottage garden, and as that is also one of the titles of your paper, I thought I might venture to place mine and yours together, as I have done before. But while I freely admit that my garden has often been benefited by yours, I am not at all certain that I can confer any benefit on you in return. I will not, however, aim so high as that, but will think rather of (my and your friends) people of my own order, who have little plots of their own, and who derive a great deal of pleasure, if not much profit, from their essays at gardening.

I have a flower plot and a vegetable plot, a few window plants, a handlight, and a small frame. My windows are always at this season crowded with plants which I have managed to keep through the winter. My frame is filled mostly with Calceolarias, the cuttings of which I put-in in the autumn, with a few plants of Pentstemons, Antirrhinums, and young Carnations which are not safe to leave out all winter. These are always safe under a little glass, while they can be planted-out early, and always do well in my garden.

Now all these I plant out at once—in fact, this sets at liberty my frame, and my overcrowded windows are thinned out by filling it with a portion of the plants. This hardens them—the Geraniums and Fuchsias—either for planting out or for flowering in pots. If I have more than my frame will hold I place some under the shelter of a wall and cover them at nights, and also shade them for the first few days from bright sun. That I find very necessary, for as their leaves are tender, the sun has much the same effect on them as frost when they are first turned out, so to make sure I shade from frost and sun too. It is surprising how nicely these plants come on. They do not look bright at the first, but they grow, if slowly, yet surely, and in the end always do better than the plants that are left too long, and so are drawn, in the windows.

At this time of the year I always shake my window plants out of their pots. Of course I do the work very carefully. My reason is this—the soil has become hard by repeated waterings, and besides it is exhausted, as some of the plants have been feeding on it the most of last summer. I give them fresh soil—food. I never put them in larger pots at this season, but rather repot them in smaller pots, as I find them do better. I have these pots clean, especially inside, as I am sure it is beneficial to the plants. I should as soon think of eating my dinner off a dirty plate as giving a plant a dirty pot, so I always wash the pots and have them dry before using. I drain my pots well. My neighbours are generally careless on this point, and thereby make a great mistake. Draining is the beginning—the alphabet of potting. If it is not learnt properly the next steps are all wrong together, and the work goes for very little and must be done over again before success can be reached. Therefore by way of a good beginning, as I said before, drain well. If I have not a piece of broken pot I obtain a flat oyster shell and lay it over the hole. I break others and lay them nicely over in layers, and break some bones fine and put over the shells. For a 4-inch pot I have an inch of drainage, and for a 6-inch pot nearly 2 inches, and all put in systematically. Before I put in the soil I cover the drainage with tree leaves or moss—anything to keep the soil from choking it, for it is of no use draining and spoiling it the next moment as—I had almost said most people do, but of course I do not mean good gardeners.

I am not so particular as to soil as some people, so long as it is in a nice state as to moisture—that is, neither too wet nor too dry. I find the surface scraped off my garden (if I have no better loam) mixed with pounded shells, and cocoa-nut fibre, in the place of leaf mould, answer well for almost all plants; but I have an opinion that careful drainage, potting, and watering makes up for the lack of dainty mixtures. I mean the soil is often blamed when the real fault is in the management. In potting I take nearly all the old soil from my plants, and pot them in the fresh, pressing it into the pots rather firmly, as light potting I have long since proved to be faulty. I never fill my pots level full; that would be a great mistake, but always allow fully an inch from the surface of the soil to the rim of the pot to hold water. For a time I water carefully, for until plants have active leaves they require to be slightly watered. Now, with this care the plants root into the new soil freely, and forthwith begin to make healthy steady growth. I always go over all my plants at this season, and give a general potting as above described, and I feel the benefit of the work throughout the whole season. Those that are to be kept in pots flourish well, and those that are to be planted-out in six weeks' time always establish themselves more quickly and grow much better than if the old winter's soil had been left clinging round their roots after the manner of balls of plaster or cement.

I may now leave my plants, being sure that they are all right, and attend to sowing a few seeds for my flower garden. I like raising these in pots. For seeds I drain my pots extra well, and fill with light rich soil made very fine and smooth on the surface. I then before, not after, sowing the seeds water thoroughly. I sow a pot of Beet for dark foliage (if sown out of doors the sparrows eat it); this is a fine contrast to the Calceolarias. If my Musk is dead I sow a pot of seed, and raise hundreds more. I always plant this in my garden; it does so well, and is so sweet. I sow a pot of Golden Feather, and have plenty of plants for edging. I also sow Asters—the Victoria and Dwarf Chrysanthemum-flowered, Ten-week Stocks, Marigolds, Zinnias, Indian Pinks, a little Ice Plant, and Phlox Drummondi. For tall plants I sow the Variegated Maize. These seed pots I often keep in the window until the soil lifts, not a moment longer; they are then placed in the frame. I always shade the surface of the pots until the seedlings appear, which prevents drying, as if the soil is dry even for an hour or two the seedlings go off. I cover all the seeds their own thickness with soil and no more, and by always keeping moist, and yet never really wet, I seldom fail, except I sow too thickly. Too thick sowing is one of the most common errors of the day. Plants are seldom spoiled by being too thin in the pots, but are frequently ruined by close crowding in their young state.

Now, by sowing at the present time the plants are ready to prick-out just as the weather is warm enough to receive them outdoors, and my frame is at liberty again, and the plants are in much better order than if they had been sown earlier and made tender by longer nursing under glass.

But I must glance at the vegetable plot. I sow now dwarf Peas in rows 15 inches apart, and Beck's Gem Beans the same. I sow a little seed of Paris White Cos and Drumhead Cabbage Lettuce, a little Early York Cabbage (it is delicious in autumn), Walcheren Cauliflower, Snow's Winter Broccoli, Brussels Sprouts, Savoys, and Cottager's Kale. I sow all these in drills very thinly—more thinly, in fact, than do many gardeners, and long experience tells me I am right. I also plant my early

Potatoes at this time in kiln-dust; no other manure is so good for them. As a background of green I plant Jerusalem Artichokes, and have a useful vegetable in winter.

Under my handlight I now sow a pinch of Celery seed, digging the ground out 6 inches deep and filling with old mouldy manure. In this I sow the seed very thinly, and I know of no better way of raising a few sturdy plants. Preferring dwarf sorts I grow Turner's Incomparable White, and Hood's Dwarf Red as the best suited to my small garden.

I should say I cover my palings with Nasturtiums and Sweet Peas by sowing the seed now. I also have Gourds, Marrows, Canary plants, Convolvuluses, and Scarlet Runners for the same purpose, but seldom sow them until the 1st of May, or late frosts ruin my plants.

This is in some measure how I proceed in April. If my simple plan can be of use to others like myself who have home plots which they cherish and try to make pleasant I shall not have written in vain, but shall feel to have made a slight return—as I have often wished—for the many hints and advantages I have derived from your long-familiar pages, and their ever-growing attractions.—J. W. C., *Vine Cottage, N.W.*

NOVELTIES IN THE ROYAL GARDENS, KEW.

Amongst the Orchids the new Cypripedium Argus of Messrs. Veitch is in flower, it is a beautiful kind and finely spotted. C. Hookeræ is extremely pretty; the flowers vary in colour, and it is observed that with the finest-marked foliage come the worst flowers, and *vice versâ*. The rare C. biflorum is also in bloom. Cœlogyne flaccida is very attractive; the flowers are numerous, and creamy white or pale yellow, except the labellum, which is tinged with orange and marked with brown lines. Here is a very dark and fine form of Lycaste Skinneri, the darkest ever seen by several Orchid cultivators. Dendrobium superbum, sometimes known as D. macrophyllum, is very handsome in baskets. It is a splendid plant for exhibition, producing rose-coloured flowers 4 inches across in two rows, along stems 2 feet long. Angræcum pertusum is extremely curious and pretty; the white flowers are densely set on the stalk, looking down which, the several parts are seen in exact lines. A plant of Phalænopsis Schilleriana has a fine panicle, and another bears one of less size.

Saxifraga Stracheyi is flowering on the rockwork. It has been cultivated in the Royal Gardens for the last four and twenty years, but is not, however, widely known in commerce. It comes near S. ligulata, and is, perhaps, a form of that plant, though quite distinct and desirable from a horticultural point of view. It is a native of the Himalaya Mountains.

OUR BORDER FLOWERS—FRANCOAS.

Though introduced many years ago this family of plants has not been brought into that general cultivation which its merits as a border flower deserve. We have no representative of our own, but are indebted to Chili for what we possess.

The varieties vary little in appearance, but their sowthistle-like leaves have a rather pleasing effect. They are easily cultivated, but sometimes die off unexpectedly, whether it is from some enemy at the base of the leaves or not I am unable to say. To keep up the supply they should be frequently renewed by division after flowering or from seed. They are a beautiful race of plants and ought to be in all collections. They are not particular as to soil, but to see them at their best they should have liberal treatment.

I find them do well in a mixture of good sandy loam, a little peat, and well decomposed dung and coarse sand well incorporated with the soil of the border, which is broken up to the depth of 18 or 20 inches. They require thorough drainage, as stagnation from water is fatal to them. Being of slender habit they require staking to prevent them from being broken by the wind. They continue in bloom for a long time. We only have some four or five kinds enumerated, and variation in colour appears to be the only distinguishing feature, yet few as they are I am inclined to think that some of them only exist on paper.

Francoa sonchifolia is the most commonly met with, and that is but seldom seen. A good plant in bloom is a very pleasing object. F. ramosum is also very scarce; F. appendiculata is a very desirable border flower and ought to be more generally cultivated. It is well worth careful tending and continues long in bloom. There is said to be a white variety of the above which must be an acquisition to this small group, but I have not seen it; perhaps some of the readers of our Journal could give us information respecting it.—Veritas.

COCKSCOMBS.

My object in writing is to direct attention to what I consider a very fine strain of the dwarf crimson Cockscomb which I had last year in McLachlan's Glasgow Prize. I thought I had one of the finest strains of the dwarf crimson extant, but this excels it. It is said to be a cross between an American variety and the old Scotch kind, and is the finest dwarf crimson Cockscomb I have grown or seen. The plant is very sturdy, the foliage ample, the leaves having great substance. The combs are fine, symmetrical, half-globe heads, the lobes gracefully curving to the stem. There is no disposition to flatness or straight tops, and the stem of the plant is as round as a Bamboo, which is a great point gained, many plants of some strains of the Cockscombs having stems as flat as a malformed Asparagus head. The outline is smooth, and the colour bright velvety crimson. The flowers proper are not numerous. If seed be wanted the flowers must of course be left; and yet for fine heads and to continue long in beauty the less flowers retained the better.

The advent of this variety will give us, it is anticipated, equally fine forms of other colours; and who will be the first to raise a "striata," a crimson one with a central stripe of yellow across the comb, or a yellow one with a crimson stripe? Collections offered in six colours are generally a delusion, and as ugly as anything for a Cockscomb well can be. They are not worthy any attention, a majority having crooked split combs and flat stems.

A word as to culture. The seed may be sown early in April. To grow a good comb about twelve weeks is necessary. Full-sized combs will keep in good condition six to eight weeks. I have had them three months in good order in a cool house. Damp is injurious, and they keep best in a dry and cool atmosphere, but not below 50° at night. In a room I have had them for weeks, but moss placed on the surface of the pots and watered heavily will rot the stem, and the saturated soil will kill the roots and the heads will fall over.

Sow thinly in light rich loam, and place in a gentle hotbed, and keep near the glass and moist, but avoid heavy waterings. The "gentle hotbed" may mean anything; therefore to be explicit bottom heat 75° to 80°, top heat 65° at night, 70° to 75° by day without sun, and 85° or 90° with sun and air. Pot-off singly when the plants have two or three leaves in addition to the seed leaves and return to the hotbed, shading from bright sun for a few days. If bright and hot, sprinkle overhead every afternoon at closing time, and have the leaves dry when the sun shines powerfully upon them; or if not, shade slightly until dry, or they may become scorched and spotted. Shift into larger pots, small shifts at a time; and as there is no need to wait until the combs are formed with Glasgow Prize, they may be shifted onward into larger-sized pots as the pots fill with roots, 8-inch or 9-inch pots being the largest size that need be employed, whilst for general purposes 6 or 7-inch are most desirable. At each potting the plants may be sunk a little lower in the soil. This, however, is not desirable if the plants are not leggy; and if they are, throw them away, for a leggy plant is not worthy of room. To look well the height of the plant should be about that of one-half the measurement over the comb from tip to tip, or the same height as the comb is in breadth. The last potting should be given when the combs are clear of the leaves.

Water carefully after each potting, and yet on no account allow the plants to become dry so as to cause flagging: first make sure that they really require water, and then apply it thoroughly. After the last potting water with weak liquid manure, and turn the plants round if they are growing crookedly, placing opposite sides to the light. After May they succeed admirably in a cold frame, which, by closing early and admitting air moderately, may be converted into a moist stove—one admirably suited to this class of plants.

A suitable compost for these plants is turfy loam about six months laid up, with a fourth of old cowdung or well-rotted manure added. It should be chopped up fine, not sifted, be well incorporated, and have moderate drainage provided.—G. Abbey.

Cologne International Horticultural Exhibition.—We are requested to state that the ground allotted for planting shrubs for this Exhibition is now at the disposal of intending

exhibitors, who can at once commence to make use of it. No charge will be made for space.

THE BOUQUET, AND HOW IT IS MADE.

It has been an object of curiosity to many how such an arrangement is effected. I will inform them. Procure a quantity of the finest wire (copper preferred), such as is used in making artificial flowers. With this the bouquet should be tied; no string or matting is required. The wire should be kept in a coil for tying, but some portion of it should be cut into lengths of about 6 inches.

The following flowers if well arranged have a good effect. The centre a double white Camellia, the florets of a good double pink Geranium, and Stephanotis floribunda, and double blue Violet or Forget-me-not; these arranged in concentric circles round the centre, with a few fronds of the Maiden-hair Fern regularly arranged between them, with a few of the fronds placed round the outer edge projecting about 2 inches, to act as guard to the other flowers, and about 3 inches of lace paper, or, as it is better known with us gardeners, as bouquet paper.

In making the bouquet one end of the coil wire is fixed to the stalk of the centre flower, and every single flower which is added is secured by a twist of the wire. A little moss should be placed just where the wire is bound round to prevent cutting the stalk. To supply the want of a long stalk the 6-inch lengths of wires are twisted round the short stalk of the flowers and bent downwards to serve in place of stalks. By the use of the wire not nearly so many flowers are required, and they will have a much lighter appearance and can be arranged in their places much more regularly than if large trusses are used, which always look stiff and heavy.

I have often remarked to my fellow gardeners that this branch of our profession does not obtain the attention that is due to it, inasmuch as that the prizes are small and not paying for the time, trouble, and expense. This is not all my complaint. A great many are shut out from competing, not because they have not the good taste to arrange a bouquet, but because they have not a supply of choice flowers, such as Orchids and other stove-blooming plants. I have watched with a great amount of interest, and found that the prizes are nine times out of ten taken with that bouquet which has the choicest of flowers. I think if the committees of flower shows were to be a little more liberal in this class of competition and divide the prizes into two classes—say prizes for the best hand bouquet of choice flowers, and prizes for the best arranged bouquet—this would open the door to many that have hitherto been shut out.—J. H., *Gardener to the Lady C. Legge.*

TRANSPLANTING LARGE TREES.

The moving and transplanting of large trees and shrubs is one of those matters which every now and then come before the horticultural world as some new invention is brought out to effect the object; but a much more useful purpose is served by correspondents like your ingenious one "A. M." from Essex, who accomplishes his purpose without the aid of those costly contrivances called tree-lifting machines, but merely applies such homely materials as are generally met with in most places where works of a moderate kind are going on. His description of the mode of tree-moving cannot fail to be understood by all who read it, and I strongly recommend it to the attention of those who have large trees to transplant. Having had experience in this work, I also give the mode that I adopted, which, like that of "A. M.," is also homely; indeed, my plan and his are much alike, differing only in some details which when explained will enable the next operator, perhaps, to glean assistance that may be serviceable in his own case.

First of all I may observe that I am not in general an advocate for removing large trees, but there are times when it is advisable to do so. One of the most difficult of these that I had to operate upon was an Araucaria about 23 feet high, and branched to the ground, but growing near another tree a greater favourite than itself. It was decided to transplant it, and towards the end of the dry summer of 1868 a trench, about 10 inches or a foot wide and about 2 feet deep, was dug round it at the distance of somewhat over 5 feet from the collar of the tree, leaving the tree standing on a circle of about 11 feet or more in diameter. This ditch was left open, contrary to the usual practice, which is to partly fill-in with loose leaves, or something that will tempt fresh roots into it; but as the circle was larger than is often the case with trees about to be removed, we thought the portion of earth left sufficient for it to exist upon until the time came for its removal. This was delayed until the beginning of October, 1872.

The site to which it was intended to remove it to being exposed to south-west winds, our first duty was to adopt means to secure it in an upright position while travelling, and more especially when it arrived at its destination. Now as everyone is aware, an Araucaria in a healthy state is an awkward thing to handle, baffling even the active monkey, it required some little tact and not a few scratches to accomplish our purpose. At the proper height upwards we fixed a wooden collar round the tree formed of several pieces of wood about the length that reached from one tier of branches and another. To this collar was fixed four strong wires of the kind used for strained wire fences, and these acted as gye or stay ties during the travelling of the tree, and as permanent braces when it was fixed in its place. This done, and the lower branches being tied up the same as "A. M." recommends, we next cut away a portion of the ground on the side it had to travel, and also on the opposite one, deepening sufficiently to be able to undermine the bole of the tree from both sides. Eventually a tunnel was made, and as soon as it was possible to pass a plank through it was done, and some litter being put upon, it was pressed upwards against the bottom of the ball. Earth was rammed tightly underneath it so as to keep it in its place until another plank could be put in, which was treated the same, and so on until the tree was completely isolated from the surrounding ground without any movement whatever in itself. The planks were simply builders' strong scaffold planks, and care was taken in placing them to allow about half an inch space or more between each, so that when the whole were in their places a stout piece of oak timber was laid across them on the side the tree had to travel, and the planks were tied to this cross piece with stout wire. A loop of the same wire two or three strands thick was next worked round the cross piece, and the mass was now in readiness to move, the ground being cut in a convenient slope for the purpose.

We had no rollers under the mass to begin with, but we had strong tackle in the shape of a very strong rope and a set of four-sheaved pulley blocks; and there fortunately was a tree to fix the block to as a beginning. With a strong pull the tree was moved, and we then had rollers put under the ball, and when once it was fairly out of the hole and upon these rollers it moved with much more ease. The distance it had to travel was upwards of 200 yards, and as the ground was moderately dry and firm, we did without planks, except in a few places. We used the pulley-and-block plan the whole way, a sort of crowbar forced into the ground, with a man to hold it, answering the purpose of an anchor to secure the block to. The movement as a whole was not a tedious one.

The hole for its permanent abode being prepared the tree was drawn into it, and the wire-fastening of the planks to the cross-piece being undone they were drawn out one at a time without disturbing the ball, which settled itself into its position. The wire braces that were fastened near the top of the tree to keep it in its place were firmly secured to the ground, nothing more was to be done but to fill-in the soil. Favourable weather succeeded, and the tree looks as well now as it did at the time it was moved.

The check given to the tree by digging around it four years before it was removed had a good deal to do with its after-success, added to which was the mild but wet winter which followed that operation; while not the least important item was the fact that the heavy mass was settled into its new place with little damage, there not being a crack in it. I ought also to have stated that a fastening around the collar of the tree was made to the cross-piece that bound the planks together at the first, otherwise I am not sure but the planks might have drawn from underneath it at the first start, which was necessarily up an incline, when drawing the tree out of the hole.

In giving the above details about transplanting large trees, I may add that notwithstanding the success above alluded to, I would, as a rule, much rather plant small trees, and, excepting in very special cases, the smaller the better, provided that attention is paid them for a year or two afterwards to prevent weeds and other rough herbage overtopping them. It is but seldom old trees that have been transplanted look healthy and well; perhaps the best example I can at present call to memory are the large deciduous trees that form the boundary of Hyde Park, London, adjoining Park

Lane. These trees do the planter great credit. Tree-lifting machines taken at their best are simply remarkable for their mechanical powers, and as such are capable of removing very great weights, regardless of the injury to the roots of the trees operated upon.

The removal of large trees has been less popular of late than it used to be, yet I trust I have said enough to make it understood that a very large specimen may be removed with very homely materials. Small trees will always repay the planter in a better way than large trees, and the chances are that at the end of ten or a dozen years the smaller trees will have overtaken those which were of great size when removed. It is well, however to know how large trees may be successfully removed when such special work is required to be done.—John Robson.

CAPTAIN COOK'S OR KERGUELEN LAND CABBAGE (Pringlea antiscorbutica).

In the interesting despatch from Captain Fairfax, of H.M.S. "Volage" (dated from Kerguelen Island, or as Captain Cook happily termed it, the Isle of Desolation), among other items there is one of some horticultural interest. It is this, "the Kerguelen Cabbage, which grows in great abundance close to the sea, is issued to the men several times a-week." Many of our horticultural friends doubtless stood up from the perusal of the despatch with their curiosity somewhat on edge to know something more of the Cabbage which merited from Captain Fairfax this specific and honourable mention, and which moreover as yet finds no place among the varieties enumerated in the exhaustive lists of the fattest of spring catalogues. In view of the foregoing, and the fact that (thanks to the "Challenger" Expedition) living plants of this most interesting of Cabbages are now amongst us, a few words regarding this curious plant may not be unacceptable to our readers. A century or so has elapsed since Captain Cook touched at Kerguelen Island, which had been discovered by a Frenchman of that name in 1772. By reason of its unmitigatedly desolate and inhospitable aspect Captain Cook would have called it the Isle of Desolation, but did not wish to rob Mr. Kerguelen of the honour. On approaching these desolate shores not a single tree or shrub, nor the least sign of any such met the eye of the navigator, but at some short distance there was some appearance of verdure. With respect to this, Mr. Anderson, who accompanied Captain Cook as surgeon and naturalist, wrote, "The verdure which appears when at a little distance from the shore would flatter one with the expectation of meeting with some herbage, but in this we were much deceived, for on landing it was found that this lively colour was occasioned only by one small plant, not unlike some sorts of Saxifrage, which grows in large spreading tufts up the hills." Mr. Anderson then introduces our plant on the scene. "There is," he says, "another plant plentifully scattered about the boggy declivities, which grows near the height of 2 feet, and not much unlike a small Cabbage when it has shot into seeds; the leaves about the roots are numerous, large and rounded, narrower at the base, and ending in a small point. Those on the stalks are much smaller, oblong and pointed. The stalks, often three or four, all rise separately from the root, and send up long cylindrical heads of small flowers. It has not only the appearance, but the acrid, watery taste of the antiscorbutic plants, and yet differs materially from the whole tribe; so that we look on it as a production extremely peculiar to the place. We eat it frequently raw, and found it almost like New Zealand Scurvy Grass; but it seemed to acquire a rank flavour by being boiled, which, however, some of our people did not perceive, and esteem it good." He then adds—"If it could be introduced into our kitchen gardens, it would in all probability improve so far by cultivation as to be an excellent pot herb." We give this extract in full, because it is the earliest description of the plant that we know of, as also an account of botanical acumen which it shows the writer of it to have possessed. The practical suggestion with which it closes remains yet to be put to the test; for until the naturalists attached to the "Challenger" Expedition succeeded in procuring and sending home seeds of it last year, no previous scientific visit to the Isle of Desolation was paid at a time when seed was procurable.

When during the Antarctic voyage of the "Erebus" and "Terror," the island was visited by Dr. Hooker, it was at a season when, as he tells us, he failed in seeing the flowers except in a broken and fragmentary form. In that magnificent work, his "Botany of the Antarctic Voyage," he alludes to this plant as being perhaps the "most interesting" procured during the whole voyage, "growing as it does upon an island the remotest of any from a continent, and yielding, besides this esculent, only seventeen other flowering plants." Dr. Hooker describes it as having "a long, stout rhizome, very similar to that of the Horseradish, and not altogether unlike that of the common Cabbage, which is, however, annual, while both Pringlea and Horseradish are perennial." In the form of the head of leaves to the common Cabbage Dr. Hooker says the resemblance is "most striking," and so is "the use both are put to," but here, he adds, the "analogy ends," as the inflorescence and the part of the plant from which it proceeds are quite distinct. Describing further on, Dr. Hooker says the rhizomes are from 3 to 4 feet long and 2 inches in diameter, full of a spongy, fibrous texture, having a horseradish flavour and bearing at the end "an extremely large head of leaves, sometimes 18 inches across, so like common Cabbage that if growing in an English garden in company with their namesakes they would not excite any particular attention."

As in the ordinary Cabbages, the inner leaves form a dense white heart, which Dr. Hooker says tastes "like Mustard and Cress, but much coarser," the entire foliage abounding with an essential oil, "pale yellow, highly pungent, and confined in vessels which run parallel to the leaf, and are very conspicuous if the head be cut transversely." During the entire stay of the "Erebus" and "Terror" in the dreary abode of the Pringlea, Dr. Hooker tells us daily use was made of the plant either cooked by itself or boiled with ship's beef and pork. The essential oil above alluded to, he adds, gives a peculiar flavour, which, however, "neither officers nor men disliked," and which rendered it more wholesome than common Cabbage, "for it never causes heartburn or other symptoms, which the latter does." As remarked at the commencement of this article, it is to the "Challenger" Expedition we are indebted for the seeds from which the young plants now in Britain have been raised, as also for the more intimate knowledge of the botanical structure of its flowers, perfect specimens of them, forwarded by Mr. Mosley, having reached England for the first time in the course of last year. The chief peculiarities of the flowers, as compared with others of the order, appear to be the absence of petals and of the usual glands between the bases of the stamens. Through the kindness of Dr. Balfour one or more young plants are in possession of Dr. Moore at Glasnevin, and from the same quarter Dr. Edward Perceval Wright, Professor of Botany, T.C.D., also had a couple of plants, which, kept in a cold frame in his garden, have, we are glad to say, come safely through the winter. Of these we hope to see and say more by-and-by.—(*Irish Farmers' Gazette.*)

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

Phyllocactus biformis. *Nat. ord.*, Cactaceæ. *Linn.*, Icosandria Monogynia.—Flowers crimson. "A native of Honduras, whence it was introduced by G. Ure Skinner, Esq., in 1839. He sent it to the late Sir Charles Lemon, who had a famous collection at Carclough, in Cornwall; and it has been long cultivated at Kew, where it flowered in January 1874."—(*Bot. Mag.*, *t.* 6156.)

Pentstemon antirrhinoides. *Nat. ord*, Scrophulariaceæ. *Linn.*, Didynamia Angiospermia.—"A very charming shrubby half-hardy plant, discovered in California by Dr. Coulter nearly half a century ago, and, as far as I am aware, found by no one since till Bolander gathered it in the Santa Maria Valley, San Diego. It is remarkable for the lemon-yellow colour of its flowers in a genus of which most of the species are red, violet, purplish, or blue, colours which rarely occur along with yellow in one group of closely-allied vegetable forms, though instances do occur, as Gentian.

"Pentstemon antirrhinoides flowered at the Royal Gardens, Kew, in September, 1874, from specimens sent by Mr. Niven of the Hull Botanic Gardens."—(*Ibid.*, *t.* 6157.)

Pyrus prunifolia. *Nat. ord.*, Rosaceæ. *Linn.*, Icosandria Monogynia.—"It is singular that no good figure should exist of so beautiful and well-known a tree as this, and one introduced before 1758, which can only be accounted for by its being usually confounded with the P. baccata, which was not introduced till 1784, and from which its connate styles and totally different fruit, crowned by the persistent calyx, at once distinguish it. I have seen no native specimens, and though stated by the earlier authors, including De Candolle, to be a native of Siberia, Ledebour does not seem to have known it,

for he quotes De Candolle and Willdenow's description, giving Siberia with a query as its habitat; and, though described by Miller in 1760, is a native of Dahuria, whence it was introduced into the St. Peterburgh Gardens. It is not included in Turczaninov's Flora Baical-Dahurica.

"Pyrus prunifolia has been an inhabitant of Kew for upwards of a century, and flowers in April and May, fruiting in October." —(*Ibid.*, *t.* 6158.)

Masdevallia Peristeria. *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria.—Flowers yellow, dotted thickly with crimson. "The lip is, as Reichenbach remarks, very singularly coloured, being covered with innumerable close-set amethystine papillæ on a white ground. The name is given in allusion to the likeness of the top of the column and petals to those of the Dove Plant (Peristeria elata), where the anther case represents a dove's head, and the outstretched tips of the petals its wings, as in the Church's symbol of the Holy Spirit, whence the name of El Spirito Santo was given to the Peristeria by its discoverers the Spaniards. Masdevallia Peristeria is a native of New Grenada, whence it was imported by Messrs. Veitch. The plant flowered in April."—(*Ibid.*, *t.* 6159).

Fourcroya undulata. *Nat. ord.*, Amaryllidaceæ. *Linn.*, Hexandria Monogynia.—Flowers green. "It is a native of the provinces of Chiapas and Tabasco in Mexico, where it was found by the traveller Giesbrecht, who sent it to Verschaffelt's splendid establishment in Ghent (now incorporated with the no less celebrated Brussels one of Linden). The Kew specimen flowered in the Royal Gardens in November, 1874, rather later than the other species, than which it may want a warmer climate, as that of Chiapas and Tabasco is described as hot, damp, and its hills as clothed with a tropical forest. It was received from the rich collection of W. W. Saunders, Esq., F.R.S." —(*Ibid.*, *t.* 6160.)

Cyrtopera sanguinea. *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria.—"The colour of the flower as shown in my own sketch is a dull reddish-purple, extending over the short spur, with a rose-red limb to the lip; colours which induced Dr. Lindley to name the species sanguinea, a name hardly justified by those hues.

"C. sanguinea inhabits the tropical region of Sikkim, and is found in dense forests at 3-5000 feet elevation. The Kew plants flowered from tubers which have been received both from the late Dr. Anderson of the Calcutta Botanical Gardens and Mr. Gammie of Darjeeling."—(*Ibid.*, *t.* 6161.)

Pear.—*Lucy Grieve.*—"This variety is remarkable for its long, narrow, willow-like leaves, which give the tree a peculiar appearance. The fruit is full medium size, oblong pyriform, broadest just above the middle, its average weight exceeding 7 ozs. The stalk is over half an inch in length, set in a very shallow depression, the sides of which are slightly unequal; the eye is closed, and set in a shallow even cavity. The colour is a clear deep lemon-yellow, thinly marked with russet dots, and having a small russet patch about the eye and the stalk. The flesh is moderately firm, fine-grained, tender, and melting, very juicy, with a rich luscious flavour, and a slight and agreeable dash of acidity, such as is occasionally met with in the Glou Morçeau. The odour of the fruit is penetrating and agreeable, and its appearance something like that of an elongated Glou Morçeau. A first-class certificate was awarded to this fine new Pear by the Fruit Committee of the Royal Horticultural Society at its meeting of October 23rd last. Ripe and in excellent condition about the middle of October." —(*Florist and Pomologist*, 3 s., viii., 85.)

NOTES AND GLEANINGS.

We are glad to hear that there is no chance of the contemplated Exhibitions of Amsterdam and Brussels interfering with each other. At a meeting of delegates held at Antwerp during the Exhibition just closed it was decided that Brussels will celebrate its centenary next year, and that Amsterdam will hold its Great Exhibition in 1877. Will London be ready by 1878? Let us hope so.

—— The following candidates have been duly elected Fellows of the Royal Horticultural Society since the 1st of January last—viz., B. Bate, Hon. and Rev. J. T. Boscawen, Mrs. A. Cumberbatch, Mrs. George Hamilton Dundas, J. Godman, Captain F. H. Hamilton, Mrs. Harrison, Charles F. Haywood, Mrs. C. Kemble, Mrs. E. S. Kuipe, Thomas Charles Perceval Lefroy, Thomas Alfred Logan, Major-General P. L. Macdougall, R. L. Pemberton, Miss R. Pennell, E. J. Reed, C.B., M.P., F. Ricardo, William Scott, Thomas Shedden, James Tedder, Earl of Wicklow, John A. Clarke, Major-General F. Conybeare, Mrs. Dansey, J. A. Fullarton, Vice-Admiral W. W. Hornby, Charles G. L. Kelso, J. L. P. Lebègue, Mrs. Lloyd, James Murray, W. C. T. Padday, Hon. Leopold W. H. Powys, Mrs. Young, Hon. Evelyn Ashley, M.P., I. de Salles, Mrs. C. D. F. Philips, Thomas William Angell, Hon. W. Lowther, M.P., &c.

—— To avoid clashing with the Manchester Show, that to be held at the Crystal Palace is postponed to the 29th of May.

—— Our correspondent Mr. J. Wright, on retiring from the service of the Hon. A. Leslie-Melville, had a handsome barometer presented him by the family as a tribute of the esteem in which he was held by them; also for his services in the village he was further presented with a valuable timepiece. Mrs. Wright and family had also gratifying tokens of goodwill from the Melville family.

—— The cultivation of the Tobacco plant in Algeria has been carried out very successfully, the soil and climate of that country being well suited to the growth of the plant. In 1874 no less than 9,700,000 lbs. were produced and passed through the State warehouses. The value of this crop was £141,224, or nearly double that of 1873. The experiment—though it is no longer merely an experiment, but a practical industry—has been carried on since 1847, and during the past twenty-seven years about 140,000,000 lbs. weight of Tobacco has been produced and sold.

—— It is stated that the Italian Government, following the course it has already adopted on previous occasions, will gratuitously distribute this year five thousand plants of Eucalyptus globulus for cultivation in the Agro Romano, especially in the spot infected by malaria.—(*Nature.*)

—— Professor Vogel of Munich has lately published, says *Galignani*, some curious experiments on camphor and its physiological action on plants. In 1798, Benj. Smith Barton first announced the stimulating action of camphor on vegetable organisms. He stated that a Tulip with its stalk dipping in a solution of that substance withered much later than others kept in common water; and that a yellow Iris that was about to fade was reinvigorated for a few hours by means of camphor. Barton therefore came to the conclusion that this drug acts upon plants as a stimulant, much as spirits do on the animal frame. These all-but-forgotten experiments have lately been resumed by Professor Vogel, who has lately communicated his results to the Academy of Munich. He first prepares a homogeneous solution of camphor by triturating it with distilled water, and then shaking it up with a larger quantity of the same; and into this he puts his plants. Two branches of Syringa (common Lilac) in blossom, of equal size and vigour, were selected; one of them was put into common water, the other into the camphorated solution. A remarkable difference was soon noticed. After the lapse of twelve hours the former was already drooping and nearly faded, while the latter was still erect and apparently as fresh as ever, some of its buds having even opened in the interval; and this healthy condition lasted three days. In another experiment a branch of Lilac which was nearly dead was put into camphorated water and revived for a short time. The action of camphor is less powerful on the Vine, and scarcely of any effect on Black Elder. The idea now presented itself that this drug might also have some action on seeds, and accordingly some of Lepidium sativum, or garden Cress, were subjected to this treatment. They were chosen very old, because in that state their germinating power is much weaker than when they are new. The seeds were placed on blotting paper in porcelain plates, one portion being wetted with the camphor solution and another with common water, another piece of blotting paper was laid over each. The germinating power of these seeds is considered not to extend beyond three years, and yet, under the influence of camphor, some of 1869 germinated in the course of twenty-four hours, and others of 1871 in seven hours, while those exposed to the action of pure water either did not give signs of life, or, at least, very imperfectly. From these and similar experiments it may be concluded that camphor is a valuable agent in horticulture.

Planting Potatoes.—Now is the time (April 4th) to plant early Potatoes. The whole of our Potato borders were deeply dug, and even manured in November, and now the soil is like a bed of ashes. Draw the drills 2½ feet apart, and plant the Potatoes 18 inches. Give them a top-dressing of burnt ashes

mixed with rotten leaves; plant near the surface. When up earth them over until about the middle of May, and you will, season being favourable, be rewarded with fine, large, clear, and good Potatoes.—R. Gilbert.

THE CASTOR-OIL PLANT.

Ricinus communis, or Castor-oil Plant, is a native of India, and was introduced to our stoves in 1548. It has long been cultivated, and from the supposed resemblance of its beautifully mottled seeds to an insect known as the tick or ricinus, the ancients applied that name to the plant. Seeds have also been found in ancient Egyptian mummy cases, and it has been known as a medicinal plant from time immemorial.

It is cultivated as a commercial product in the Levant, Spain, Brazil, and other parts of the tropics. Some of the species are found growing spontaneously in Italy, choosing as their habitat the moist thickets on the southern coast. From the province of Verona the largest supplies of both seeds and oil are now drawn, and from nowhere can such pure oil be had as from the manufactories of that province. The plants are grown in fields of rich soil in rows 4 to 5 feet apart, and 3 feet distant in the rows. They are earthed-up as they grow, and in September the seeds are gathered by women. It is stored and manufactured with great care, and good seed will yield about sixty-six per cent. of the commercial oil.

As ornamental plants the different varieties of this genus are largely cultivated. The large, broad, palmate leaves, from which is derived its popular name, Palma Christi, are very effective by their rich glaucous purplish hue and the metallic lustre of their surface. It was formerly grown only under glass, but since subtropical plants for our gardens have become popular, the Castor-oil Plant has formed an important part of this extremely ornamental mode of garden decoration.

Fig. 63.—Castor-oil plant (Ricinus communis).

When well grown few plants are more stately than this, or form a more distinct feature amongst the occupants of the garden. R. sanguineus, R. Obermanni, and R. purpureus are amongst the most effective varieties; where one only is required, that first named may be selected.

They are easily raised by sowing seed at the present time. To insure a free germination the seed must be placed in brisk bottom heat, such as is afforded by a Cucumber or Melon frame. It may be sown one seed in the centre of a small pot, or several in a pan, the seedlings to be afterwards potted.

The plants must be grown in a genial temperature of 60° at night, and be shifted into larger pots as they require, and be kept in a light place near the glass. By this means they will be fine plants by the 1st of June, when, after being duly prepared, they may be planted out.

The soil suitable for potting them is rich turfy loam with a little peat and leaf mould. The plants require copious supplies of water when in active growth. The soil in which they are planted should be rich and deeply worked, and the site sheltered from strong winds, which cause injury to the foliage.

A point of importance to bear in mind in the raising of these plants is for the cultivator to correctly calculate his conveniences for growing them on without check. February is not too early to sow the seed in one garden, but March sowing may be premature in another. The time for sowing is to be decided by the means of growing the plants freely afterwards. By attention to this, those having no other convenience than a warm frame and cool structure or two may have attractive Castor-oil Plants. In this case the end of April will be sufficiently early to sow the seed, and by the time the plants are established the weather will permit their being removed to an unheated structure without injury.

Plants from seed sown in April and having no obstacles to free growth will have a better appearance in August than those from seed sown two months earlier, and which had become drawn and obstructed in growth by lack of suitable conveniences. This is a rock on which many a wreck occurs. Safety lies in calculating means, and from this determining the right time to sow seeds of tender plants.

Those who have beds filled with annuals which are not off the ground until July, may at that time have the beds refilled with Castor-oil Plants from seed sown in April, or even as late as the first week in May, and the plants be grown on, liberally and freely, in frames heated by the sun alone. By rich ground and an abundance of warmed water the plants, if not tall, will be highly ornamental through the autumn months, and will increase in beauty until destroyed by frost. Single plants in suitable places always look well. Plants from seed sown late will not flower, but that is of little or no importance, as the ornamental appearance of the plant is due to its noble growth and beautiful foliage; yet in the hot summer of 1868 we saw plants flowering out of doors in the midland counties from seed which had been sown in April.—W.

AQUARIUM AND FLOWER STAND.

How to Fill the Aquarium.—First cover the bottom of the tank to the depth of one half-inch with pure fine sand, on the top of which put an equal quantity of fine gravel; over this gravel sprinkle small ornamental stones, shells, coral, &c. Everything put into the tank must be thoroughly washed. Next put in position an ornamental central piece of coral, stone, or anything out of which you can construct an arch through which the fish can readily swim. Now fill the tank one-third full with pure cold water from a lake, river, or well.

Plants.—The best aquatic plant for aërating the water in the aquarium is Anacharis canadensis, found growing (in America) on the bottom of nearly all sluggish streams and ponds. The Valisneria spiralis is the next best, after which comes the

Myriaphyllum verticillatum. There is a species of Conferva found in rapid streams attached to stones that is an excellent aërator, valuable especially during the winter when other plants do not flourish. If you have the Anacharis remove all its decayed stems and leaves, wash it clean, and arrange in groups of ten to fifteen. Make a hole in the sand, insert the root end of the plants, and secure in this position by pressing small stones about them. Insert in this way about six to eight groups, and be careful to make them secure at the bottom. Roots are not necessary, as the cuttings will soon send out fine white rootlets. Now fill up the tank with water to within 1½ inch of the top. Wait two or three days before introducing the fish, that the plants may have time to commence growing.

The Fish.—Almost any small species of fish may thrive in the aquarium; but we think the best for the purpose are the red-bellied minnows and sticklebacks, all found in small streams. Select small fish; from four to eight for a tank holding from eight to twelve gallons. Such a tank will support four small ones better than one larger. Introduce also ten or twelve water snails. The Lymnæ are the best; yet the Planorbis and the Physa are interesting. Better, however, have a few of every kind you can find in the ponds and stagnant pools in your vicinity. They feed on the softest parts of aquatic plants, and do not exhaust the oxygen mixed with the water, for they are air-breathing, and have to come to the surface to take in a supply of air to be used while they go about cleansing the plants and glass of the tank with their curiously-constructed jaws.

Food.—The best food for the fish are angle worms and flies in summer, and fine bits of fresh raw meat in winter. Never give the fish more than they can eat at one time, for whatever is left will injure the water.

Position.—The best place for the aquarium is where it will be exposed to the sun at least one hour each day, in order that the plants may exhale oxygen, which can only take place under the stimulus of light. Too much light, however, is to be avoided, as the fish do not thrive when exposed to the sun, and the glass will be soiled by confervæ, a green vegetable matter. In summer an outdoor position is best if there be sufficient shade. It is well to cover the aquarium, both for the shade and to keep the fish from leaping out of the tank.

Cleansing the Aquarium.—If well balanced with plants, fish, and shells, the water will remain sweet for an indefinite time. We have an aquarium that has been in service for the last twelve years, and which does not require a change of water oftener than once or twice a year, and then only to renew the sand which becomes filled with excrementitious matter.

Amphibious Animals.—If lizards, frogs, or other amphibious animals are introduced, they should be provided with some surface above the water to climb upon. The rocks may be built above the water, or a piece of flat cork may be allowed to float upon it, on which the animals will climb.

Gold Fish may be kept ten or twelve years (their average period of existence) by using the following precautions:

1st. Allow not more than one fish to two quarts of water.

2nd. Use the same kind of water, whether well or river; change it every other day in summer and twice each week in winter.

3rd. Keep clean sand and pebbles at the bottom, washing it occasionally or replacing with a fresh supply.

4th. Use a small net rather than the hand while changing the water.

5th. Feed with plain biscuit, yolk of egg, lettuce, and flies, once each week, except in cold weather. Feed but little at a time. Remove any crumbs that may remain on the surface after feeding.

6th. Do not feed at all from November to the end of February, and but little during the following three months.

7th. If there are growing plants in the aquarium water need be changed but rarely.

8th. Keep from sunshine and in the coolest part of the room.—(*New York Pirate.*)

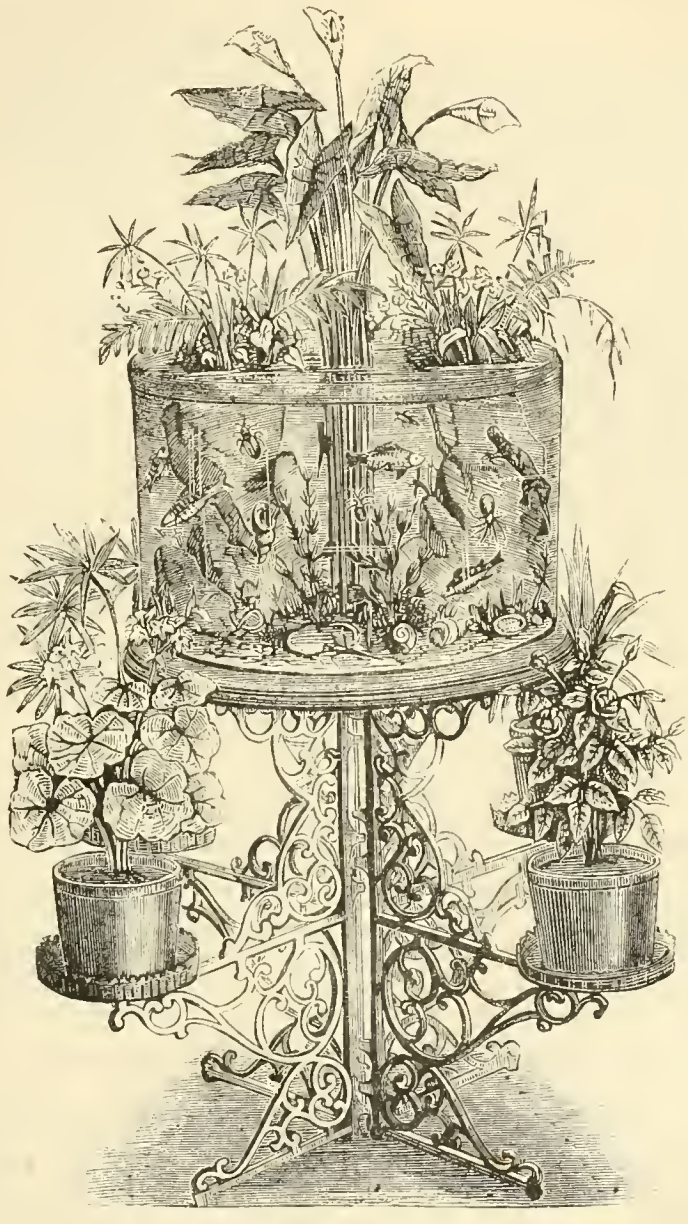


Fig. 64.—Aquarium and flower stand.

William Austin.—The obituary notices which have from time to time appeared in the Journal have recorded the passing away of men famed as amateurs, as gardeners, or as patrons of horticulture; I will add a passing tribute to one in a more humble rank of life, who for the qualities which I shall presently allude to was, I think, without an equal. But who was he? it may be asked. Anyone who had frequented our metropolitan shows will not fail to have noticed wherever my friend Mr. Turner's plants were put up, busy amongst them, diving-in where others "feared to tread," and looking at all with a critical eye, the active form of William Austin. He was really only Mr. Turner's carter, but I never met anyone who had a better taste for arrangement than he had, nor one who could detect any little faultiness

either in those belonging to Mr. Turner or others. He was, moreover, an excellent judge of plants and flowers, and I have often, when the plants were staged and I had nothing to do in the way of judging, said, "Now, Austin, come round and tell me where the prizes ought to go," and rarely have I found him at fault; and when I add to this that he was a faithful and honest servant, and had lived with his employers for thirty years, I think I have established his claim to this brief notice.—D., *Deal*.

WHITE AND CLUSTER ROSES.

"Cornubia" (page 256) has done well to direct attention to this enjoyable type of Roses, and to the scant attention they receive at our exhibitions. If their individual blooms are less imposing than those of the Perpetuals, the clusters render the plants admirably adapted for garden decoration. We seldom find them cared for except in very old or cottagers' gardens, yet how cheery and sweet and homely they are! They are excellent for shrubbery cultivation, rich soil being not at all essential to their free growth, and their profuse blooming and lively colours show to advantage in the dark evergreen setting which the shrubs afford.

They are extremely suitable as summer screens in covering bowers, rustic fences, and piles of roots, and possess an easy airy gracefulness and a delicate perfume which cannot fail to be enjoyed. Their finely-wreathed clusters of blooms may, too, be gathered by armfuls without robbing the plants, and the free natural arrangement of these tresses are ever attractive in our dwellings. The tendency of the times is to foster the increase of massively-formed highly-coloured Roses—and splendid they are—yet at the expense of perfume and elegance of habit of the clustered-flowering varieties.

Surely, as "Cornubia" has suggested, means may be afforded to bring the cluster Roses into our exhibitions, and thus add diversity to the shows; also to let the public see how attractive they are in themselves, and how eminently they are suited to meet the special requirements of a flower-loving world. I hope "Cornubia" will take up the theme again, and tell us more about this charming class of Roses.—Aimée Vibert.

RUSSELIA JUNCEA.

Judging from the miserable starved appearance which Russelia juncea has in some gardens, one would think that it was difficult to grow, and from the way in which it is in others "stuck" in any out-of-the-way corner of the house, to be hardly worth growing. Now my experience of this plant is, that it is very easy to grow, and, when well grown, one of the handsomest and most useful early-winter-flowering greenhouse plants we have. I have had splendidly-flowered plants of it from 3 to 5 feet high, one mass of bloom from top to bottom, and continuing in flower from three to four months.

The way I recommend it to be grown is as follows:—Suppose the plants to be just done flowering, keep them rather dry for six weeks or two months; by this time it will be early spring. The plants should be then shaken out of the pots, and the balls carefully reduced and repotted in the same-sized pots, which should be well drained. The compost ought to be a good fibry loam, with a good allowance of half-rotted stable-droppings, that from an old mushroom-bed does very well. A few of the branches ought at the same time to be cut off close to the neck of the plant, which will encourage new shoots to make their appearance from the base, and it is to those new shoots we must look for our future plant.

The plants ought to have a good position in the house, and be carefully and sparingly watered until the new shoots make their appearance, when water can be given more freely. As soon as the young shoots are an inch or two in length, a few more of the old branches can (if an old plant) be cut away, leaving enough of the freshest of them to nicely cover the pots. The plants at the same time ought to have a good shift, and no more shifting will be necessary.

The old wood should be allowed to hang down, and the new shoots encouraged to grow upright; but they must not by any means be closely tied, as at this period they grow very fast; they should only have as much support as to keep them from touching the glass, or coming in contact with anything else, as they are very brittle, and would snap off like young Asparagus tops; in fact, if growing very strong they somewhat resemble that plant: care should also be taken that they are not broken by the hand when watering, as it is ruin to them to be stopped; neither must they be allowed to suffer for the want of water; for one need not expect to have very nice specimens if checked in any way when making their growth. As soon as they have nicely established themselves in their new pots they ought to have plenty of liquid manure. I find they are very partial to soot.

The point I strongly recommend is to get a fresh growth from the bottom every year. My experience of this plant convinces me that this is by far the best way of growing it. Grown upon this system, it will be useless to expect large well-bloomed specimens if they are half starved. They must have fair pot-room, and be grown as vigorously as possible. They can do with as much liquid manure as almost any other plant.

Most cultivators keep the old wood year after year, as they would that of a hardwooded plant. This, I am convinced, is not the best way of growing them, for they seldom flower so well a second time upon the old wood. The flowering period will be considerably prolonged by giving them a good top-dressing of very rich compost.

After they have completed their growth they can be neatly tied to an upright stake; two of the leaders will be quite enough to take up their full length; the others can be tied half-way up, and allowed to hang down. Treated in this way, they will make handsome specimens, by no means to be despised as exhibition plants at a provincial flower show.—R. Reid (in *The Gardener*).

THE POTATO DISEASE.

In the issue of your Journal of date 14th January, under the heading, "Jottings of Last Year's Gardening," it is observed, "Culturally the Royal Agricultural Society has, to its own satisfaction no doubt, proved there are no kinds of disease-proof Potatoes. It is hoped the public, and especially the ninety-four essayists, will be convinced that the prize of Earl Cathcart was 'justifiably withheld.'" On what ground the public could have come to such a conclusion I am not aware, but as one of the ninety-four essayists I most emphatically deny that all the essayists have been shown any valid cause for admitting that the prize was "justifiably withheld." As an essayist I consider the decision a very shabby one, and the essayists have been treated with but curt justice and courtesy. I, however, exonerate the distinguished nobleman who so generously offered the prize from participating in the proceedings.

It may be true that the essayists did not succeed in working a miracle by the "prevention of Potato disease"—a feat, I venture to think, beyond the power of man—neither is it in our power to "prevent" frost; but although the "prevention" of the latter is not within our power, we can, by the adoption of suitable remedial measures, render its injurious effects comparatively harmless. Precisely so, I presume to think, will be the case with regard to Potato disease. It appeared to me that the essayists were thrown overboard to meet the bright idea which was conceived of inventing a kind of miraculous Potato which was to be a "disease-proof Potato!" which, if successful, would no doubt have caused a sensation, and made the fortune of the lucky person who could make the public believe in its efficacy.

I along with, I presume, the other essayists, was invited to be a competitor in testing the efficacy of this golden Potato, being given to understand that a considerable number of agriculturists had agreed to do so; but having had no faith whatever in this miraculous tuber, nor in the conditions of competition, I made no response. Since then I understand the project has been abandoned, but it is to be hoped the essayists, notwithstanding their rebuff, will prosecute their respective theories, the investigation being of incalculable national importance, and by no means a hopeless one. I feel assured that if "prevention" is impossible, satisfactory remedial measures will ultimately be found.

One hundred and fifty years ago he was reckoned a very clever farmer who could from his scanty and precious stock of seed spare a dish for his "Christmas dinner," a scarcity arising from causes which experience and skill afterwards removed, as it is to be hoped will be the case with Potato disease, on which I do not mean to inflict on you a lengthened disquisition.

I cannot close those remarks without expressing my concurrence in the very able, practical, and judicious views relative to Potato disease expressed in the article in your issue of the 4th ult. signed "Beta," whose views I thoroughly endorse.

Although the locality therein referred to had the greatest rainfall in England, it did not follow that Potato disease must have ensued there, something more than excess of rainfall being required to produce Potato disease, which in all probability we may have periodically, like the somewhat analogous diseases of pleuro-pneumonia — foot-and-mouth, and grouse disease.—C.

TREE MIGNONETTE.

There seems to be an idea among some gardeners that Tree Mignonette is difficult to grow. Such, however, is not the case; for if it received half the attention that other things have, such miserable objects as one often sees called Tree Mignonette would not be met with. We have six pyramids and two standards, the largest pyramid being 4 feet through and 3 feet high, the standards having heads 2 feet through. We have cut abundance of bloom from them since the beginning of October, and shall be able to continue doing so until there is plenty outside. Mr. Wood's treatment is briefly as follows:—Sow the seed, two or three in the centre of thumb pots, the beginning of April, and as soon as the seedlings are large enough thin them out to one in each. As soon as the pots are filled with roots give them a small shift, and continue doing so until the size of pot is reached in which you mean your future specimens to remain. Pinch all the flower buds out as soon as they make their appearance until the end of August. When they are in flower weak manure water may be given them two or three times a week. Loam, peat, and leaf mould in equal proportion, with a good sprinkling of silver sand, suits them well.—Lockhart M'Intosh (in *The Gardener*).

NOTES on VILLA and SUBURBAN GARDENING.

Garden Walks.—At this time, which may be considered the beginning of a season of pleasure to be derived from a garden, it would be difficult to find more important work to be done than by having the *walks* in good order. If they are formed of gravel the surface should be turned over to the depth of at least 3 inches, which will not only destroy both weeds and moss, which is very desirable at the commencement of a season, but the walks will present a fresh and lively appearance, and be more agreeable to walk upon during the summer. But, like most other things, the work must be done with judgment—first, if the edges of the walks are of either Box or grass they should be neatly trimmed, the former by clipping and filling up all vacancies, and the latter by being smoothly pared with the edging iron; and if there are borders beyond these they ought to be first dug and all completed before the walk is touched. By first completing this heavy work of border-digging a considerable time is afforded for the walk to settle down firm again before being much used, which is important as contributing to its smoothness and beauty.

In turning gravel walks let the work be done in dry weather, and as the turning goes on do not go far before you rake the surface even and to its proper shape, rolling it regularly as you go on, say about every 40 feet, for gravel always binds best when it is first turned up, because it is then moist on the surface. It may be necessary to rake the walk both lengthways and crossways, and work the surface free from holes and make it all even alike, this must be done before any rolling. For some time after the walks will need frequent rollings. If the walks are of turf, which is seldom seen in this part of the country, they must be first swept and well cleaned, then pare the edges and keep the grass well rolled and mown during the summer.

The Lawn.—Everyone knows and appreciates clean and well-kept lawns, and to have them so requires labour and good management. This time of the year is the most important, for what is to be done in the way of levelling should be done now. The grass should be well swept when dry, and also rolled, and the first time it is mown, which is not always the easiest, it should be cut rather close and again rolled to compress the surface; after that the grass which grows is young, consequently the machine or scythe works easy and well.

Flower Beds.—Take the first opportunity to arrange the plan of bedding for the season if it has not already been done, particularly as the preparation of the soil for any particular or choice bedding plant must be now considered. I advise that the soil in the beds be once more turned up to the original depth advised for the winter digging, and all additions as to soil or manure be now completed. As a rule, the most usual sorts of bedding plants do well in ordinary soil, but a change is beneficial, and I question if it would not be an advantage in the case of the amateur or occupier of a small garden situated near the town who cannot, without considerable expense, obtain an entirely fresh or new soil, to half empty his flower beds and transfer the soil to his kitchen garden, and make up the difference from that garden in return. I am satisfied he would find this mutual exchange beneficial to his plants; and again, although it is not to be expected that an amateur can make any very special preparations such as a professional gardener has the chance to do, yet if he cannot do as I suggest above, he can study and provide a little difference in the soil according to the requirements of different plants.

Many complain of and have discarded the Calceolaria. There is no better plant for free-flowering than this, yet it needs special treatment. As to soil, it enjoys a firm, rich, deep loam; but in hundreds of cases it cannot have it, but instead, if the soil is light, it can have a layer of rich manure placed about a foot under the surface, and the surface itself pressed firm almost to treading during planting. Plant out early, say by the last week in April, and do not allow them to stand in close quarters till the plants are drawn up and the wood become hard, and the eyes which ought to produce shoots are all dead. This is not likely to be satisfactory. I do not believe this plant likes to be interrupted at the root after a certain stage; hence my reason for advising early planting. I do not think they can be overgrown in the beds.

Pelargoniums of the Zonal class may be overgrown in a very rich, damp, heavy soil. In such soil they are pretty sure to make too much leaf and growth rather than a profusion of bloom. This is rectified if the soil is less rich and lighter; whereas the variegated sorts, which are grown more for their leaf-colouring, require a rich soil and to be grown vigorously, as witness the benefit such a soil imparts to Flower of Spring.

Enough has been said to illustrate what I mean by special preparation for different sorts of plants, a matter which is too little thought of by many who are admirers of the usual kinds of bedding plants when well grown, but who lose the chance of doing the work at a time when it can be most conveniently done, which is during this month.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

HARDY FRUIT GARDEN.

But little work can be done in this department now, except to protect the trees from frost and feathered depredators. So far the weather has been exceptionally fine, clear days, with a little sun, and a night temperature sufficiently high to dispel all fear of injury from frost. We would rather have the days cloudy than continuous sunshine, which hurries out the blossoms on wall trees too rapidly. The Apricots have not required shelter so far, and the pistils pushing out prominently show that the blossoms have set well. Peaches and Nectarines will soon be in blossom on the walls. It is easy in small gardens where but few trees are grown to look carefully over the young shoots before the blossoms expand, and with a small sponge and soapy water remove any aphis or scale. It is hopeless to attempt this after the blossoms are open, and before the syringe can be used the aphis has attacked the young leaves and caused them to curl up.

It cannot be too much impressed upon all who would be successful gardeners that all insect pests should be destroyed as soon as they are observed, and a watchful eye should be kept upon all trees that are likely to be attacked. If the present fine weather continues the protecting material will not be required, but it ought to be in its place in case a sudden change should occur. Not only on the walls, but in the open garden, all sorts of hardy fruit trees give promise of being covered with blossoms.

We have again run the Dutch hoe through the Strawberry quarters. It is just the surface that requires to be stirred. If the hoe is pushed into the ground too deeply a large proportion of the roots will be destroyed. When the plants have grown well and the crowns are fully developed the whole body of the ground from the surface downwards is a mass of roots, and quite close to the surface will be found a network of active hair-like fibres, ready to absorb the manurial properties of the surface-dressings which are applied as soon as the flower trusses are thrown-up.

Now is a good time to put in Strawberry plants. If the runners have been thickly placed in beds in autumn they remain in the same position through the winter, and are now starting into growth. Many persons have not the opportunity to plant their beds at the proper time—that is as soon as the runners can be obtained. The plants put out now will, if strong, throw up flower trusses, but these must be cut off, as well as any runners that may be formed. Those who forced Black Prince or Keens' Seedling early will now have a quantity of plants from which the fruit has been gathered. As these plants are taken out of the forcing houses they may be removed to a cold frame for a week or ten days, the frame to be kept close for day or two, so that the leaves formed in a high temperature may not suffer. They ought to have a large supply of water a the roots, so that the ball is quite moist to the centre. If such

plants can be planted on well-prepared ground they will produce a crop of fruit in the autumn. The roots, being matted firmly together, forming a ball impenetrable to water, must be loosened out with a pointed stick, and the mould ought to be very firmly pressed round the roots when planting.

FRUIT AND FORCING HOUSES.

Vineries.—We have finished thinning the Grapes in all the houses. This is an operation that will not stand over. The berries in their early stages swell so rapidly that unless they are thinned-out, as soon as ready, the quality of the fruit is deteriorated. Black Hamburgh, Buckland Sweetwater, and all free-setting varieties are ready for thinning in ten days after the first flowers on the bunch are observed to open. Muscat of Alexandria, Canon Hall Muscat, Golden Champion, and all the shy-setting section cannot be done until it is perceived what berries are set; this will be about four or six days longer than the others. It requires some experience to know how many berries may be removed, and it is much the best way to thin-out the whole at once. Many persons make a second thinning just before stoning, and it is desirable to look over the bunches at that time, as even with the best management some of the berries may be too much crowded, or a few badly-formed berries require to be removed.

The growing shoots are now tied down into their places, and it is necessary to look over the Vines once in ten days, and to stop back any growths that have been formed; but if the Vines are carrying a good crop of fruit but little growth will be made after the berries are thinned-out.

Late houses that have not received any artificial heat, except so much as kept the frost out, are now starting into growth. No bedding plants should be in the house at this time, but if it is required a few pot Roses, or any other plants requiring to be forced, may be placed in the house until they are likely to be injured by shade from the leaves. Camellias that have finished flowering may also be started into growth here; the moist atmosphere and daily syringing is congenial to them, causing a healthy vigorous growth.

Pot Vines intended for early forcing next year should now be pushed along with a high temperature, the leaves to be freely exposed to the light, and sufficient space allowed for them to develope themselves. Plants crowded together in a tan bed will not give satisfaction. The strongest and best-ripened canes are produced if the pots are placed on a stage over hot-water pipes, not plunging the pots at all, and they will be strong enough, if the compost is good, without any manure water being used. The canes ought to be trained-up close to the glass, but not so close that the leaves come in contact with it. Syringe the leaves daily to keep them free from spider.

Orange Trees in Pots.—As it is not necessary to have a house entirely devoted to Fig trees to obtain a small supply of Figs, in the same way a few dishes of delicious home-grown Oranges may be obtained from half a dozen pot plants placed in a house with a high temperature, the only stipulation being that they are not under the shade of Vines or other dense-foliaged plants which are trained to the roof. Tangierine Oranges are the earliest to ripen, but fruit that is just now set will not be ripe until November; and later sorts, such as St. Michael's and Maltese Blood, will not be ripe until Christmas. The only insect pest that is any trouble to us is the brown scale, and the best way to banish it is by hand-washing. If the trees are pretty well free from it now, vigorous syringing daily will keep the leaves clean and the plants healthy all through the summer months.

GREENHOUSE AND CONSERVATORY.

There is no lack of flowers at present in this department. The late Camellias are unusually fine, and any Azaleas that have been forced retain the flowers in good colour so much longer now than they do if allowed to open without any forcing in June. Deutzia gracilis with its clustering sprays of snowy white flowers lasts long in beauty if the plants are kept cool and shaded from scorching sunshine.

Much of our time has been taken up in preparing Hyacinths, Tulips, &c., for exhibition. Tulips require nothing more than a slender stick to support the flower stalk; the flowers are also tied round with a strip of matting to prevent the petals from being shaken off during transit. The Hyacinth spikes are tied to a wire support, and no dressing is allowed except to arrange the bells with a cedar pencil. Many of the sorts have the bells naturally drooping, but the best exhibition varieties are those that have them stand out in a horizontal position, so that the spike forms a cone narrower at the top than the base, and regularly covered with perfectly shaped bells. Stiff healthy foliage is quite as essential to success as well-formed large spikes.

any of the Hyacioths exhibited this year were faulty in this respect, the foliage being so weak that it hung quite over the pots. This is caused by keeping the plants in a house badly ventilated or too far from the glass. Even if it is necessary to push on the plants to have the flowers open before a given day they ought to be placed quite near the glass, and a little ventilation should be allowed in the house all night, and the atmosphere of the house should not be too much charged with moisture.

Stage Pelargoniums are now growing vigorously, the most forward of them showing their flower trusses. The plants are not large, being such as are best adapted for decorative purposes. They will each produce from ten to thirty trusses of flowers. They are in 7-inch pots; each of the branches ought now to be supported with a neat stick. Smaller plants propagated in the autumn will produce better trusses of bloom in 5-inch pots than if they were potted into those of a larger size.

Green fly has been detected on the young growths, and the house will be fumigated with tobacco smoke the first calm night. It is great waste of expensive material to fumigate hothouses in a gale of wind. Wetting the roof of the house with water from a syringe closes many of the laps on the glass. Remove all decaying flowers at once; brush the stages at least once a-week; study cleanliness and neat arrangement, avoiding overcrowding the plants, which to the initiated is always suspicious, as it is generally a cloak to hide badly cultivated plants.

Plants that are no longer required in the house, such as Roses, Deutzias, and, indeed, any flowering shrubs that have been forced, though hardy enough in themselves, must not be placed out of doors, or the young growths will be injured. If no cool glass house is available for them they ought to be sheltered from cold winds and frost by a canvas house, turf pit, or some similar arrangement. When cold east winds prevail with sunshine it is best to admit but little air, rather using the shading to keep down the temperature.

Summer-flowering, New Holland, and other hardwooded plants should be examined daily. They must not be crowded with the more rapid-growing softwooded subjects, and particular care is required in applying water at the roots.—J. DOUGLAS.

HORTICULTURAL EXHIBITIONS.

SECRETARIES will oblige us by informing us of the dates on which exhibitions are to be held.

JERSEY.—May 5th, Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.
BATH.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.
CRYSTAL PALACE COMPANY.—Flower Show, May 29th; Rose Show, June 19th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.
COVENTRY.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.
LEEDS.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.
BURTON-UPON-TRENT.—June 16th. Mr. Wm. Shave, Bond Street, Sec.
GLASGOW.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
FAREHAM.—June 23rd. Mr. H Smith, Sec.
EXETER (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.
WISBEACH.—June 30th. Mr. C. Parker, Hon. Sec.
MAIDSTONE.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.
SPALDING.—July 1st and 2nd. Mr. G. F. Barrell, Hon. Sec.
SOUTHGATE.—July 3rd. John Miles, Esq., Hon. Sec., Southgate, N.
DURHAM AND NORTHUMBERLAND.—To be held at Elswick Park, July 7th and 8th. Mr. R. Ravely, Sec.
NOTTINGHAM.—Rose Show, &c., July 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.
TONBRIDGE.—July 14th. Mr. W. Blair, Free Press Office, Hon. Sec.
WIMBLEDON.—July 15th and 16th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon. Sec.
DARLINGTON.—July 16th, at Southend. William Hodgson, Sec.
BRECON.—July 22nd. Mr. W. J. Roberts, Sec.
CLECKHEATON.—July 24th. Mr. S. H. Williamson, Hon. Sec.
PRESTON.—July 28th and 29th. Mr. W. Troughton, 4, Church Street, Hon. Sec.
SOUTHAMPTON.—July 31st and August 2nd. Mr. C. S. Fuidge, 32, York Street, Lower Avenue, Sec.
RAMSGATE.—August 25th. C. D. Smith, Esq., 8, Marine Terrace, Margate, Hon. Sec.
DUNDEE.—August 26th, 27th, and 28th. Mr. R. McKelvie, 51, Reform Street, Sec.
SOUTH OF SCOTLAND.—To be held at Dumfries, September 3rd. Mr. J. Blount Dinwiddie, 11, Buccleuch Street, Dumfries, Hon. Sec.

TRADE CATALOGUES RECEIVED.

J. Wills, F.R.H.S., Onslow Crescent, South Kensington.—*Catalogue of New and Choice Stove and Greenhouse Plants.*

C. Van Geert, Rue de la Province, Antwerp.—*Hardy Trees and Shrubs.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Strawberries Cankered (*Head Gardener*).—Trench the ground and manure liberally with charred refuse and bone dust.

Pears' Blossom Buds on Leading Shoots (*I. S.*).—This is not an uncommon occurrence, and cannot be prevented; leaf buds will start further down on the young wood, and must be trained in the same place that the leading buds would have been trained. We have seen walls 14 feet high furnished from the base to the summit with trees trained as yours are, but they were on the Pear stock. The Quince stock is used when dwarf trees are required; but even on the dwarf stock the same height may be attained.

Jerusalem Artichokes (*H. T.*).—Plant at once fully 2 inches deeper than usual, and if towards the autumn the ground cracks by the swelling of the tubers surround the stems with soil. Exposure of the tubers to light and air is, we believe, the main cause of their not boiling tender.

Roses for Bleak Heavy Soil (*Amateur*).—Your only chance seems to have strong sorts on seedling Briar, but you must not expect really good Roses under the conditions mentioned. We recommend Charles Lefebvre, John Hopper, Madame Clemence Joigneaux, Sénateur Vaisse, Boule de Neige, Gloire de Dijon, Général Jacqueminot, Fisher Holmes, Maréchal Vaillant, Baroness Rothschild, Abel Grand, Countess of Oxford, Victor Verdier, Madame Victor Verdier, Madame Eugénie Verdier.

Aucuba Berries (*H. H. B.*).—Your old Aucuba did not produce berries because it was a female plant; so soon as you planted a male plant near, fertility became a matter of course. No Aucuba berries were produced in this country until Mr. Fortune brought a male plant from Japan a few years since.

Honey Locust Seed (*J. Grant*).—Apply to the seedsmen who advertise in our columns.

Apple (*J. E.*).—A variety to precede the Blenheim Orange—that is, to be ripe in September, you may grow the Wormsley Pippin.

Name of Grafton (*A Gardener*).—We do not think the name originated from any practice in your craft. The sign of "Grafton" the chronicler and publisher in Elizabeth's reign was a *graft* issuing from a tun; and Stowe, his rival chronicler, satirically observed that it was "the noise of an empty *tun* and an unfruitful *graft*." Grafton retorted that Stowe's Chronicle was composed of "lyes foolishly *stowed* together."

Ink for Zinc Labels (*E. G.*).—Make a saturated solution of sulphate of copper in gum water. Write with a quill pen. When quite dry give the labels a coat of white hard varnish, the labels being slightly warmed before application.—(*English Mechanic.*)

Flowers for Button Holes (*A Beginner*).—Amongst forced flowers—Lily of the Valley, Pinks, Tree Carnations, Bouvardias, Spiræa japonica, and Roses are suitable; also Gardenias, Ericas, Epacrises, Heliotropes, Lucnlia gratissima, Rogiera gratissima, Burchellia capensis, Clerodendron Balfouri, Eranthemum pulchellum, Eucharis amazonica, Euphorbia jacquiniæflora, E. splendens, Hoya carnosa, H. bella, Ixora acuminata, I. javanica floribunda, I. amabilis, Jasminum gracile, J. Sambac flore-pleno, Pancratium fragrans, Pentas kermesina, Rondeletia speciosa major, Stephanotis floribunda, Tabernæmontana coronaria flore-pleno; the last are stove plants. The following greenhouse plants are useful:—Adenandra fragrans, Bouvardia aforenamed, Camellias, Citrus (Orange), Cyclamen persicum, Daphne indica alba and rubra, Dracophyllum gracile, Habrothamnus aurantiacum, H. fascicularis, Jasminum grandiflorum, Lantana vars., Mandevilla suaveolens, Myrtles, Pergularia odoratissima, Pelargoniums, especially the double-flowered, Pimelea decussata, P. spectabilis rosea, Plumbago capensis, Polygala oppositifolia, Polygala Dalmaisiana, Primula cortusoides amœna and vars. alba, grandiflora; Rhododendron fragrantissima, Jasminiflorum, Prince of Wales, and Princess Royal, Rhyncospermum jasminoides, Statice profusa, double Primula sinensis, the double varieties of Azalea. There are also Roman Hyacinths, Narcissus, Tuberose, and Violets. There is no work on "forcing flowers."

Surplus Seed (*Idem*).—To mix old with new seed is not honourable—nay, it is adulteration, an imposition upon purchasers, and one that cannot be too severely censured. New seed germinates more surely and strongly than old, but we should not, nevertheless, destroy old seed until we had tested its growing quality, and if that proves equal to new seed, then feel justified in using it.

Cucumber House (*T. H.*).—Place the plants 2 feet 6 inches apart, or have five plants in each of your beds. For the Cucumbers a lighter description of soil is required than for Melons, light turfy loam for the former, and strong loam for the Melons, with a fifth of manure intermixed, or if the loam be rich omit the manure. The wires are best secured to the roof by an angle iron at each end, guide irons at about every 3 feet or beneath every rafter, the angle iron secured to the ends by bolts, and the guide bars at the top and bottom, with holders screwed into the rafters to have them the proper distance from the glass, and all to be pierced with holes for the wires to pass through. Something of the kind you want is given in the Journal for January 28th, this year, page 70.

Rose House (*F. E.*).—If you have Roses upon the roof so as to cover it, the space beneath will be made too dark for the successful cultivation of dwarfs. One up each rafter would be a different thing to covering the roof, but even those ought not to have a greater spread than 12 to 15 inches, leaving a clear space between each of 2 to 2½ feet, which will admit of light to the dwarf plants. Cocoa-nut fibre refuse is not, unless thoroughly reduced, good for pot Roses, and in that state is a desirable addition.

Passiflora edulis (*Mrs. H.*).—It will succeed in a vinery if it can have light, but not beneath the shade of the Vines. The vinery we presume is heated sufficiently for the Grapes to ripen in July or August. The Passion Flower would be best planted out, and the foliage must have light, the shoots being trained at about the same distance from the glass as the Vines. The fruit will ripen about August. The new fruit from Japan is a kind of Quince, and is said to make an excellent conserve.

Hardiness of Primulas (*Hawkshead*).—All the Primulas you name are hardy, but not as border plants, for many of them are alpine, and require the treatment of alpines, having the shelter of rock from drought in summer and wet in winter. We think yours have gone off from damp, and the pots not being plunged their roots may have been destroyed. The atmosphere also may have been too close, which is pernicious.

Mushroom Bed (*A Subscriber*).—Make the bed of fresh horse droppings, and not a "little firm" but very hard, the firmer the better, and about a foot deep. We like the droppings better when they have a small quantity of short litter, but this is not material for so small a bed. The droppings ought not to be wet, but be kept under cover. In about a week the heat will be at its highest; spawn it when it is reduced to 75° at 2 inches deep, and at this depth put in the spawn, pieces about 1½ to 2 inches square, and 9 inches apart, and cover-up, beating firmly. In about a week you may earth the bed 2 inches thick of good loam, and beat very firm. In six weeks you may expect Mushrooms to appear, but during that time the bed is not to be watered, or not until they show, and then keep only just moist and regularly so. If they do not appear at the six weeks' end you may commence watering, but lightly at all times, yet keep moist, the extreme either way will destroy them.

Cyclamens (*Lilla*).—Your plants will bloom as usual next year by the following treatment: Water sufficiently to keep the foliage fresh, withholding the water as it shows signs of decay, yet when the plants are quite at rest do not permit the soil to become dust-dry. They will start into fresh growth towards the autumn, and must then be repotted, carefully removing a portion of old soil, and adding fresh. A cold frame is the best place for them, or they may be stood in a shady place out of doors in May.

Sparaxis and Ixias (*Anxious Inquirer*).—In last week's answers to correspondents you would see particulars of treatment. After flowering they are to be kept dry, and potted in September. When at rest they may be kept in the soil in any cool place.

Cyclamen persicum (*Idem*).—Keep the seedlings moist until they show indications of going to rest, when they may be placed in a cold frame or be planted-out in a bed in a sheltered open border, and they should not be watered, the moisture afforded by the soil being ample. In September, or earlier if they begin to grow, they should be taken up and potted, and placed in a frame, keeping rather close, and in October be removed to a greenhouse. If kept in pots in a frame see to watering occasionally, so as to keep the soil from becoming dust-dry, but avoid making it sodden. Repot when they are commencing growth, and do it without injury to the fresh rootlets.

Neapolitan Violets (*Idem*).—Divide the plants into as many parts as you can, preserving a little root to each division or sucker, and these plant out in good rich light soil in a shady border, a foot apart every way. Water well during dry weather. Keep all runners cut off as they appear, or if you want stock they may be layered; but the plants will not be so good for flowering as those which were not allowed runners. Remove with balls to a frame at the close of September, or they may be potted.

Solanum Capsicastrum (*J. W. L.*).—Cut the plants in now with a view to compactness, and keep rather dry until they are breaking freely, then turn out of the pots, reduce the ball, and return to the same size of pot; place in a pit, keeping rather close and moist, and in June put them outdoors in an open warm situation, housing in September, or grow-on in a cool airy light house. They are, however, much cleaner and healthier for an outdoor sojourn in summer.

Sparrows Eating Peas (*Idem*).—They will eat Peas a foot high, much more when 3 inches; and even a yard high we have known them eat the growing haulm. Dust them with quicklime, which will not injure the Peas, whilst it will keep off slugs, beetles, and other predatory vermin as well as the sparrows.

Geranium Leaves Dotted (*Old Subscriber*).—The traces of insects upon the leaves are those of thrips, which may be destroyed by fumigating with tobacco, choosing a calm evening, and having the foliage of the plants dry. The plants are suffering from the cold ungenial weather. Brighter and warmer weather will put them all right; but you must admit air earlier in the day so as to dry up any deposition of moisture on the leaves during the night, before the sun falls powerfully upon them.

Zonal Pelargoniums Dying (*R. B. T.*).—No cause other than that of a disorganisation of the plant's tissues can be assigned as the malady by which you lose your plants. It is common to all plants, and especially those in a high state of cultivation, and is mainly a consequence of the treatment being too liberal in the plant's early stages, which causes an imperfect development and undue vigour, and this results in disorganised tissue; the young growths suddenly blacken and shrivel, simply because the roots are inert, and the stem incapable of transmitting to them a sufficient supply of sap. There is no remedy other than less rich soil, more air, and a drier atmosphere.

Gas-heated Boiler.—In answer to "J. H.," p. 262, the size of my boiler is as follows:—Diameter, 14 inches; height, 4 inches at centre; and 3 inches at sides. The case is 15 inches diameter, height 16½ inches to bottom of flue, and 26 inches to top of flow pipe. I have no doubt but that it would heat 150 feet of 2-inch pipe sufficient to keep out any frost, as I could keep my house up to 48° during the severe weather without turning the gas fully on.—J. W.

Beetle Injuring Vine Shoots (*A. B.*).—It is the Pitch-coloured Weevil, Curculio picipes. Spread a sheet under the plants attacked, and go at night with a lantern and shake the plants. The weevils are then feeding, and will fall on the sheet.

Names of Plants (*G. S.*).—The Begonia is probably a hybrid. (*Edwin*).—Hypoestes sanguinolenta. (*A. B.*).—Sparmannia africana. (*F. B.*).—Bæckea virgata. (*P. W.*).—Hypoestes sanguinolenta. (*Mrs. Oliver*).—Hibbertia dentata. (*J. S.*).—2, Selaginella sp.; 3, Abutilon sp.; 4, Conoclinium ianthinum. (*W. T.*).—2, Ficus stipulata; 3, Gymnogramma calomelanos; 4, G. ochracea. (*W. J. W.*).—2, Aspidium angulare; 3, A. coriaceum. (*W. D.*).—Erica carnea, Early-flowering Heath. (*Fred. and L. M. H.*).—Erythronium dens-canis, Dog's-tooth Violet. The specific names allude to the shape and colour of the roots.

POULTRY, BEE, AND PIGEON CHRONICLE.

EGGS.

We have only to glance at the advertisements to see how great a trade goes on in egg-selling. It is perhaps the only business in which members of every rank of life can meet on the

same ground, consequently it thrives apace. Even in back yards of large cities we frequently find prize poultry kept, while in many localities nearly every villa garden has its portion wired off for the chickens. We rejoice to think that it is so, and that our feathered friends are daily being more appreciated. Notwithstanding the great number of poultry fanciers of the present day we often wonder where the purchasers of eggs can come from.

Many egg purchasers are, we believe, fanciers in embryo who, seeing week after week the names of successful exhibitors at our shows, go to an exhibition for the first time, and catching the fever inwardly, burn also to win prizes and ornament their sideboards with silver plate. Perhaps these good people think the cheapest way of winning poultry glory is to buy eggs from a great and successful exhibitor, and so they despatch a post-office order, and order a sitting of eggs. In due time they arrive and are placed under the hen, and many expect to obtain from the dozen eggs at least nine or ten birds as good as the vendor is in the habit of exhibiting. Perhaps they hatch only four or five, perhaps less, that is the first disappointment, and at once they imagine they have been swindled; still when these which they have hatched grow up, they are often sent to a show in the full hope of winning the silver cup—in fact, people think for a few shillings' worth of eggs to win cups and prizes. The birds go to the show and are beaten, or perhaps some friend says they are not worth sending; then comes disappointment number two, and with it epithets of the strongest nature are heaped on the unhappy vendor's head. These egg-purchasers buy in ignorance and are not genuine fanciers.

Many do not take into consideration that the exhibitors who win so much generally breed scores of birds either at home or at neighbouring cottages and farms from which they select their winning specimens, and that a small fortune is spent in their rearing. It is a lottery almost whether the dozen eggs Mr. Jones buys contain the egg to produce the best bird of the year or no; and even if Mr. Jones does draw the winning egg, whether he knows how to make the most of it in the way of feeding and management. We are able to testify to this from two cases in which we have been concerned. First, many years ago we saw some eggs advertised at 10*s*. 6*d*. the dozen; we sent for a sitting, and hatched one chicken, and that bird won something like five cups and twenty prizes. Secondly, we sold a dozen eggs for 15*s*., from which four were hatched; one of those turned out to be a celebrated hen. In this case the gentleman gave 1*s*. 3*d*. to us for the egg, and we purchased the hen back again for £15 15*s*. from him.

Egg-buying and egg-selling will always be, however, unsatisfactory between strangers. The purchaser always thinks the vendor is a swindler if he does not have at least half a dozen birds for his few shillings. We really do not wonder so many decline to sell eggs. We are repeatedly told by those who do not sell that they only refuse to do so from feeling it must be unsatisfactory to all parties.

Then we are often asked about the packing of eggs. Some write to us and say if the eggs had been packed in a box they would have hatched; others, if they had only been in a basket we should have had better success. A third party says the eggs should not have been in hay, and others that they should. Experience, though, seems to show us that hay, from its elastic property, is more suitable than bran or sawdust, as these are shaken close in the transit, and the eggs are disturbed and cracked. We think a wrapper first of strong soft paper and then wisps of hay round each egg should answer all purposes, and baskets or boxes may be used according to the distance they have to travel.

Egg-buying people, no doubt, think they only have to bear the misfortune of an unsuccessful sitting. They very likely think when the great exhibitors send eggs to each other success can somehow be insured. We can only say that last season we reckoned the chickens from bought eggs had cost us 22*s*. 6*d*. each by the time they were hatched. We know of one party who finds egg-purchasing answer. He makes a rule of buying £20 worth every season, and always goes again to those who used him best. This party hatches what eggs he can, and sells their produce. When all expenses of every kind were paid connected with the £20 worth of eggs this man cleared in 1873 £27 15*s*., and in 1874 £38 16*s*. 6*d*. Now this is all straightforward and pleasant, but as we wrote in another journal, from which article we have here taken many passages, there is one kind of egg-purchasing from which all would do well to steer clear. We heard of such a one only this time last year. This party purchased sittings of eggs from noted exhibitors, and then having waited three or four weeks wrote and said all the eggs were clear, and he would indeed be obliged if the seller would send a fresh lot, or even half a sitting, free. We know of an instance in which this was done, and it afterwards transpired that there were nine chickens walking about in this party's garden which were the produce of the first dozen eggs, and which were described as all clear, and about which the purchaser had written so piteously.

There is another point many are hazy about: the difference between rotten and clear eggs. Many think rotten eggs are unfertilised eggs, while it is the reverse. Clear eggs are those which have never had the germ developed in them. For instance, the eggs laid by hens running without a cock will be all clear, and as clear many days after being sat upon as the day when first placed under the hen. Rotten eggs are eggs in which the germ, after being placed under the hen, develops till being accidentally chilled becomes putrid.

In egg-purchasing there is always risk. We are entirely at the mercy of porters and railway officials whether the packages are thrown about or moved carefully; but on the other hand sittings which people have come and personally chosen from our egg drawers and carried away have not hatched so well as those sent by train at the mercy of railway officials to Ireland, Scotland, and Jersey.—W.

THE EXHIBITION DORKING.—No. 13.

BY T. C. BURNELL.

WHITE DORKINGS.

These are great favourites in all country places, their snowy plumage and coral combs never showing to greater advantage than when contrasting with the green of a country meadow. They do not do well, however, for a large town, as their bright plumage very soon becomes soiled.

Fig. 65.—Cuckoo Dorking Cock.

A White Dorking's comb must be rose-shaped (double), firmly fixed on the head, and without any tendency to lop on one side. A single comb is a disqualification, but is now rarely or never seen. The ear-lobe, as in all Dorkings, should be red, and the feet white. The legs and feet are frequently found of a pinkish tinge, but white is the proper colour for the leg of a Dorking. The colour of the feathers should be a bright spotless white, and it is here where the difficulty occurs, as so many birds show a yellow tinge in their plumage. Many birds will moult out white, but if exposed to the influence of the sun will rapidly turn yellow. The cocks especially will become yellow on the hackle and saddle, their feathers being brighter in colour are more prone to absorb the sun's rays. Some cocks will keep much purer in colour than others, and, for breeding, we must be careful to select birds with this peculiarity in addition to their possessing a good comb and all the Dorking characteristics. Yellow beaks and toe nails should be avoided, as clearly showing a cross.

White Dorkings are not very great favourites with the show community, owing to the great difficulty found in keeping them

white and clean enough for the show pen. As soon as the sun attains any power the cocks to be shown are better kept out of the sun, or their plumage will soon become tanned, but with every care white birds occasionally require washing before exhibition.

The simplest plan for washing fowls is to fill a large crockery-pan or tin vessel with about 8 inches depth of warm soft water, souse the bird well in it, and wash thoroughly with a soft sponge and white curd soap till the dirt is all out, then pour in fresh water and wash-out the soap, and remember that as long as any soap remains the feathers will never web properly. After rinsing thoroughly squeeze-out as much water as possible. The bird should be lightly and quickly dried with a soft Turkish towel, and then be placed on some clean straw to dry. Each bird should be placed in a separate basket before a bright fire or in the sun, and in about twelve hours they should be quite dry and beautifully white. Sour milk is a capital thing to remove sunburn—that is, if the yellow tinge is caused by the sun and is not natural to the feathers.

White fowls should not be allowed to eat maize, or, as I have before stated, it will be very difficult to keep the plumage white. The best dust-bath for them is a heap of white drift sand or road grit.

The eggs are generally white in colour, but Mr. Creaswell informs me that some birds of his well-known strain lay pink eggs, and these must certainly look very pretty on the breakfast-table. The chicks when hatched-out should be of a yellowish-white colour.

CUCKOO DORKINGS.

During the last two or three years these have advanced much in public favour. They have now a class allotted them at the Crystal Palace and at two or three of the other principal shows, and as several fanciers are taking them up we shall probably see more of them in future.

They are called Cuckoo Dorkings on account of their feathers being somewhat similar to those found on the breast of our summer visitor the Cuckoo; but they are also called Blue Dorkings. The term "speckled Dorking" is sometimes applied to them erroneously. They appear of a blue or dark blue colour, but on examination it will be found that every feather is evenly marked with broad bars of dark blue or dark grey, on a whitish-grey or light blue ground.

In breeding these birds many chickens will come so darkly marked as to be almost black; these must be discarded, as we must not forget the original blue-mottled breast of the Cuckoo, to which we have to breed. The chief point to look to in exhibiting them is, that the cock and hen are of the same shade of colour, and that both are evenly marked all over. Rose comba are correct in this variety. The principal faults in the cocks are yellow hackles and saddles. They are too commonly found with white in the sickle feathers. A perfect cock with a Cuckoo tail is a rarity, but as size is one of the principal points in a Dorking it will not do to sacrifice an otherwise good bird for this slight blemish.

The hens are really wonderful layers, in fact quite equal to Hamburghs; while, though for the table they do not reach the size of the Dark Dorking, their full breasts and juicy flesh, combined with very early maturity, render them most acceptable in the larder. They are decidedly a hardy breed.

In conclusion, I will mention what I consider are the proper classes to be given to Dorkings in a poultry-show schedule. If only two classes are given they should be for Dark Dorkings and for "Any other variety." If three classes are given they should be for Darks, Silver-Greys, and for Whites or Cuckoos. Many committees do not receive as many entries as they should do by classing the Silver-Greys with the Dark birds, the result being that the Silver-Grey birds are never entered in the class, for their defeat is certain. If there is only one class for Dorkings it is very rare to see anything but Darks, the result being that the Committee lose the Silver-Grey, White, and Cuckoo entries, which if three prizes were given would be sure to make good classes.

COMING POULTRY SHOWS.

Epworth (Lincolnshire).—This Society holds its Show on May 7th. The Committee will send the birds on to Otley for that Show, which is to be held on the 8th. The prizes are £1 and 10s., and the classes are only few, neither Cochins, Brahmas, or Dorkings being sub-divided. Polands have a class, and Game Bantams are well looked after. Entries close on April 24th. The fee is 3s. 6d. per pen.

Sunderland holds its first Exhibition on May 17th and 18th. We are glad to see the name of the Judge is announced—viz., Mr. Dixon of Bradford. The prizes are 30s. and 15s. Most of the breeds have classes. There are five £2 2s. cups. Surely it would be best to give the money in cash instead of plate, for a £2 2s. article can only be a poor one. They are given in addition to the prize money. We are delighted to see Malays have a class. Bantams must be favourites in Sunderland, they have six classes and two of the five cups. Entries close May 3rd, the fee being 4s. per pen.

Crowle holds its Show on June 1st. The schedule is in many ways good, but the classes want more breaking-up. Cochins of all colours have to compete together, which is absurd. Black Hamburghs have no class. We wonder at this, for they seem to fill the best of the Hamburgh classes very often. Muscovy Ducks have a class, which is a novelty. There are twenty-two Pigeon classes for single birds, and most breeds are provided for, Magpies, Swallows, and Archangels having classes. Poultry and Pigeons have twelve pieces of plate between them, in the shape of cups, tea-services, &c. Both poultry and Pigeons have a point cup. The entries close May 17th. The Judges are announced.

Portsmouth.—The Royal Counties meets at Portsmouth on June 15th to the 18th. This town truly is rich in poultry shows. This will make the third show within six months. The prizes are 30s., 20s., and 10s. in Dorkings, Brahmas, Cochins, and the Variety class. The other classes have 20s. and 10s. Cochins are again lumped together, and as this class was one of the best filled at Reading last season they most certainly should have been divided this year. Polands have two classes. We hope we shall find them better filled than last time. The Pigeons have seven classes, which are very badly allotted, Magpies having a class, and Trumpeters, while Jacobins, Pouters, Turbits, and Dragoons go without. The Judge is not announced, but we may generally rely on meeting our friend Mr. Baily officiating as Judge at this Society's meeting. The entry fee is 3s. 6d., and entries close on May 15th.—W.

Scarcity of Chickens this Year.—In my poultry book I find noted that last year at this time (March 30th) I had 130 chickens and this year only fifty-two, but I hope to have sixty more in a few days. I lost but one chicken last year, which the hen trod on, out of 176. This year I have lost two. I have good neighbours that supply me with broody hens. The difficulty has been with the eggs, which have hatched out badly in consequence of the cold weather.—P. Harris, *Diss*.

RUSSIAN TRUMPETERS.

I must take up my pen in defence of my especial favourite the Russian Trumpeter. Your able correspondent "Wiltshire Rector," whose opinions on the Dragoon controversy, by the way, are entirely in accordance with my own, says in his letter of April 1st, "Unfortunately the Foreign Trumpeters will not breed in England." Now I bought two pairs of imported Russian Trumpeters from a well-known dealer two years ago, and bred from them nine young birds that season, five of which are now alive, and hatched-out as many more, but having unfortunately no feeders the earlier nests died of cold. Far from what he states being the case, I find that when they do breed they do so freely; but the young birds are delicate and hard to survive the first moult; that over, they are in my experience as hardy as any other high fancy breed.

I am anxious not to leave your correspondent's remark unnoticed, as I look upon them as quite as well worth cultivation as any fancy Pigeon we have, not excepting the Pouter and Carrier, and fear that such an assertion if passed over might deter others from attempting to breed them.

I should be very glad if anyone would tell us where they really come from, and how they are fed and treated in their own country. Northern Russia is a large place, but that is all the information I have been able to obtain as to where they are bred.—John H. Hutchinson.

RUFFED GROUSE.

In your Journal of March 4th, 1875, I see the question of importing Ruffed Grouse has been raised. Perhaps as I reside in a country where they abound, a few remarks may not be thought out of place.

The woods and barrens of Nova Scotia are covered with berries of various kinds growing on plants and shrubs, and in the former, abundance of cones of the several species of fir: all these are food for the Grouse. The question of introducing them into Scotland would not be one of climate, strictly speaking, but of food suitable to their wants.

After the first fall of snow the greater number of these berries are covered, then the grouse becomes poisonous, being obliged to eat berries at other times avoided. Several cases of severe collapse with fainting fits have occurred, to my knowledge, to people who had eaten Grouse, particularly the back and legs, after midwinter. But I have never heard of a fatal case when a mustard emetic, followed by stimulants, was given in time.

From their habits of running and treeing on any alarm they seldom give a chance of a flying shot, and I doubt their being much appreciated by sportsmen at home. They are easily potted on the ground, or in trees, by those patient enough to watch for them, so the Halifax market is full of them in early winter at 1s. 6d. to 2s. per brace.

As they are very quaint pretty birds when strutting about, a few would be a pleasing addition to the game of a home park.—J. Sheldon Furlong, *Surgeon Major, Halifax, Nova Scotia.*

LONDON FANCY CANARIES.—No. 1.

Of all the varieties of the Canary none are more beautiful than the breed known as the London Fancy. They have not only an exceedingly silky, gay-coloured plumage, but the contrast of the rich-coloured body feathers and black wings and tail are very striking. They are compact in form, and require more art and skill at the hands of fanciers in the bringing of them ont than other kinds. In this instance nature is assisted by art. For years past pure-bred London Fancy Canaries have been mostly confined to very few breeders, chiefly those residing in and about the metropolis, from which the breed takes its name. As to when or how the breed derived that particular name the oldest inhabitant would be at a loss to say, as much so as to when or how the terms Norwich, Manchester Coppy, Yorkshire, Scotch Fancy, or other particular breeds, each and all of which have striking contrasts, were applied.

I am not Darwinian enough to determine the knotty point as to how the supposed natural law of selection, climate, interbreeding, or food, may have brought about the peculiar forms or shapes of the different breeds. But one thing is clear—various kinds of food with artificial means of casting the feathers will produce various shades of colour, but not any new colour. Frequent instances have been known of the London Fancy birds having been bred and moulted in other parts of England, but not with that success generally as in the hands of the London fanciers. As a rule the palm for exhibition birds has been mostly held by the London exhibitors. Still I have known exceptions, more especially of late years, and some of the most noted fanciers of London Fancy birds in and about the metropolis have sustained defeat, their conquerors being superb specimens from South Devon. I believe that a southern climate is conducive to the success in breeding and moulting of these birds.

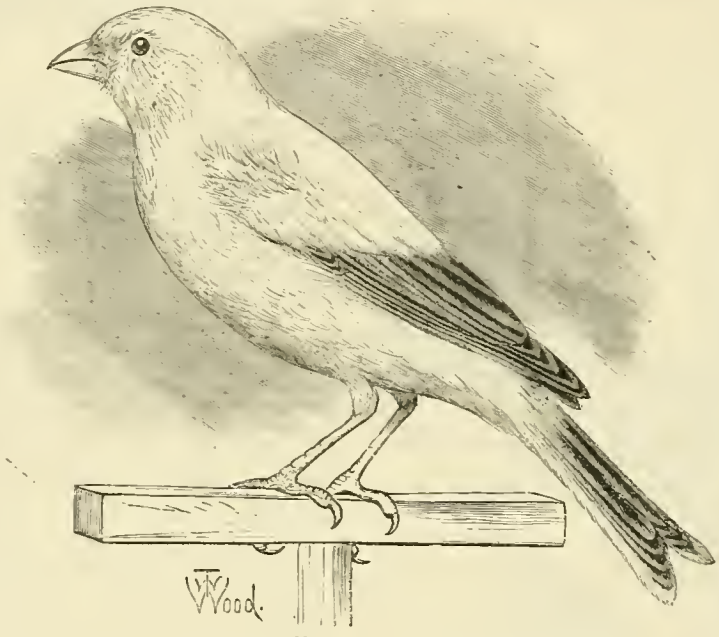


Fig. 66.—London fancy.

Some few years back I saw it asserted that there is a secret how to breed and moult the London Fancy Canaries, of which there are two kinds—Jonque and Mealy, and that such secret was held alone by the London breeders. This amused me much. In justice to the London Fancy breeders (several of whom I became acquainted with many years ago, but who have since departed from this world), I must say that when seeking for knowledge from them it was freely rendered. Now the supposed secret just amounts to this: that if one fancier is an adept at his work, and brings forth something striking to the eyes of other fanciers, those who are not proficient at their work conclude that there is a something of which they are ignorant.

London Fancy Canaries in their first or nestling feathers much resemble young Lizard birds, having dark plumage, excepting the cap, which is mostly clean or light in colour, but sometimes they are broken capped. Although resembling Lizards in first feathers, I consider them of an entirely distinct breed, but how brought about will no doubt remain a mystery.

Upon this point, however, there is some diversity of opinion. From one breeder of nearly half a century's experience I elicited the belief that the breed of the London Fancy was of a distinct kind. This I am inclined to believe. Another fancier of great experience and repute says, "With regard to the breed I cannot tell as to the origin of it, but it is supposed to have come from the Lizard Canaries." There is just this marked difference betwixt the moulting of a young London Fancy bird and a Lizard—the former when undergoing the moulting process in one of the cages adapted for the purpose (and upon which I shall remark hereafter), if properly moulted, will cast its entire dark body feathers, whereas the Lizard bird undergoing a similar process in the moulting cage will retain its dark, although improved, plumage throughout.

The drawing we publish in this number represents a London Fancy bird in its exhibition plumage, having a clean body and black wings and tail. The bird was exhibited by Messrs. J. & W. Waller, of Tabernacle Walk, Finsbury, London, who carried off both the first prizes in classes 17 and 18 at the recent Crystal Palace Show.—Geo. J. Barnesby.

WEATHER UNFAVOURABLE FOR BEES.

During the whole month of March the weather and wind have been so bitterly cold that the bees at Sale have seldom come out. I cannot remember a year in which the month of March was so unpropitious as the last one. In February the queens began to lay, and patches of brood could be found in almost all hives in this locality. I have seen no young bees yet, neither have we seen any bees carrying pollen on their legs, the weather being so cold. Whether the bees have succeeded in hatching all their brood during the cold weather or not, I have not had time to examine; if not, foul brood will be prevalent this season. In cold weather in early spring brood may be, and is sometimes, chilled to death, and it may perish from want of attention and nourishment. Bees are very helpless creatures in cold weather. Brood, chilled or starved to death, becomes foul, putrid, and pestilential in hives of bees. It is destructive of health and prosperity, and is incurable.

The bees of hives containing foul brood are invariably sitting more loosely amongst their combs than the bees of healthy hives. In examining hives at this season to find those most likely to be affected, I gently remove their covers and then turn the mouths of hives upwards so that I can see the bees amongst the combs. If the bees of some are more easily disturbed, and run more rapidly over their combs than the bees of others, I note them for further examination by the use of fustian smoke. In bar-frame hives the bars containing the brood can be taken out and examined. If small compact patches of brood be found they should be cut clean out, and pieces of empty comb fitted in their places. This is very easily done, and it is better to sacrifice some healthy brood amongst the foul than let one cell of foul brood remain in a hive. If cells of diseased brood be found widely spread over the combs we have evidence that the malady began last year, and should have been found out in the autumn.

All healthy hives will require kindly treatment now, and should be fed thrice a-week till the fruit blossoms appear. Half a pound of sugar is enough for three feeds a-week at present for a hive. By-and-by more will be needed if honey cannot be gathered by the bees. Both the numbers and activity of bees increase the consumption of food. The fact that bees have been greatly hindered in their work of breeding and development during the whole of last month should make apiarians endeavour now to stimulate and encourage them as much as possible, otherwise this year will be like the last one, very remarkable for late swarming.

Heavy mantles and warm muffs and woollen to the chins worn by ladies up to the present time, and winter overcoats on the backs of gentlemen, should teach bee-keepers that warm coverings for hives are necessary during cold springs like the present one. Bees cannot be too well and warmly covered

during the months of January, February, and March, if standing out of doors.—A. Pettigrew.

OUR NATIVE BEES.

Few persons have any idea that we have in these islands about 220 species, that they vary in size from one-and-a-half to about fourteen lines in length (I need hardly say a line is the twelfth part of an inch). Some are almost entirely destitute of pubescence, while others, as the bumble bees, are densely covered. The colour of their outer shell or case is generally a blackish brown, though sometimes quite a blue black; several are bronzy, while some are beautifully variegated with red, yellow, or white. Of course I am alluding to British species only. It is exclusively the female and neuter that collect the honey and pollen for the subsistence of the future young. The males do nothing but make themselves as happy as the sunshine will allow them, though no doubt, in sporting about from flower to flower, they are unconsciously making themselves useful by assisting nature in the distribution of pollen. This is collected in various ways. Some of them carry it on the shank of the hinder leg, some on the whole leg, which is densely covered with long hairs for the purpose. One large genus (Andrena) has a curled lock of hair at the base of the hind leg, beneath it; the back part of the thorax or middle portion of the body is generally more or less covered with longer or shorter pubescence, sometimes curled; and some (the social bumble and hive bees) collect into a basket, as it is called, formed by an expanded joint of the hind leg (tibia), round which is placed a row of stiff setæ, curved slightly inwards, and standing at nearly right angles to the outer surface of the leg. The hind legs of all those constructive bees which gather pollen on the leg are considerably thickened.

Another group collect on the belly, the plates of which are densely covered with stiff hairs for the purpose. The leaf-cutters and masons (Megachile and Osmia) are the principal ones of this division.

There is another large group of six genera, that have no special provision for carrying pollen; and they need none, because they do not collect any: they were named by the Rev. W. Kirby "Cuckoo bees" from the resemblance their habits bear to those of that bird; but more of them anon. The males in all are harmless insects, though some of them look far from it with their large forcipate mandibles; and when held in the fingers work their bodies about as if they meant stinging; but it is only the females and neuters that are furnished with that weapon. The males also differ in having thirteen joints to the antennæ, whereas the female has only twelve: the latter generally has that member subclavate and geniculated, the former usually more or less filiform; the male has seven segments in the abdomen, the female has six, and in one genus only (Anthidium) is smaller than the male. They are separated into two great divisions; in the first of these the tongue has two folds, and in the other three; the former are called Andrenidæ, or short-tongued; the latter Apidæ, or true bees. The Andrenidæ are again obtuse and acute tongued. There are two genera of the obtuse tongues, one of which (Colletes) bores its tunnels into the earth, dry bank or walls, and the other (Prosopis), a small black bee, bores into dead branches of brambles and rose trees—in fact, in any ready-made hole, or into dry banks. The hole being made or provided, they construct a cell, like a thimble in form, by lining the bottom of the hole with a secretion from the mouth, which dries and looks like goldbeaters' skin. Having collected sufficient honey and pollen, which is placed at the bottom of the cell, the insect lays an egg on the mass, closes the mouth of the cell, and proceeds to form a fresh one, joining to that already made. In this way she makes several of these cells, and then closes the mouth of the burrow, if in the earth, with soil. The obtuse tongue of these bees seems admirably adapted to plaster the cells with the secretion.—(*Hardwicke's Science Gossip.*)

HOW TO MAKE A BEE HIVE.

First, form the bottom board. Let it be 11 inches wide, by about 20 long, and about 1 inch thick. Put cleats on the under side to prevent warping. Plane the upper side smooth. Take a piece of hoop iron 11 inches long, seven-eighths wide; one-fourth inch from one edge, make six or eight holes through to drive nails. Put under the hoop iron a strip of veneering of hard wood, driving nails through this as well as hoop iron. Nail it across about an inch from the end or bottom board. The hoop iron should project over the place under it three-eighths of an inch. This will give a space to hook on the frame.

Next obtain material for frame. Let two pieces be about 11 inches long, one-half inch thick, and 1½ wide, measurements exact. Two pieces 18¾ inches long from inch boards, and three-eighths thick. Nail through the shortest pieces into the longest ones, just one-fourth inch from top and bottom. Nail firmly with finishing nails. Guides for straight combs should be in the top. The frame is held in position by a piece of hoop iron 3 inches long, bent into a right angle. Two holes are made through it to fasten it with nails to the lower corner of one end of the frame, and it is ready to hook under the hoop iron on the bottom board, and the frame will stand upright. A small nail dropped in loosely prevents unhooking. A half dozen will sit on the bottom board. A wider board can be made if wanted to make the hive larger, or two can be joined together. Directly under the centre, where the front end of the frame sets on the bottom board, an entrance can be made. Let it be cut out of the bottom boards half an inch in depth and three-fourths wide, extending 4 inches under each frame. The sides and top are made of half-inch boards, planed smoothly just the size of frames, with cleats nailed on each end to prevent warping. Put one on each side, and one on the top, and tie together with a stout rubber cord. It will hold everything snug, and the hive is done. It is convenient for our actual needs.

But as our readers may desire surplus honey in boxes as well as to extract, arrangements may be made for them. Have the bottom board wider than specified above, and a number more frames, according to the strength of the colony. Then make a number of small frames—be sure and have enough. The boards of which they are made need be only one-fourth inch in thickness, and 1½ inch in width, and the length just right to make a box when nailed together, 5 by 6 inches square. Six of these will go in one of these large frames. If they do not stay in properly a little wedge will hold them firmly. A guide can be put in the top of each.

As many frames as a colony can possibly need should be prepared; a part or all may be put into the hive with the others, and all shut up closely. If only two are put in let one be on each side outside of the others; they will need but little attention until full. But if bees are crowded outside, more should be put between the full combs of the hive. A number of these frames, with combs started in them, may be put together on the top of the hive, covered with a box—holes in the bottom of course—glass or boards on the ontside. These combs will be filled in less time if first put in the main hive and then removed to the top. When these little frames are put between the full combs of the hive they will need looking at once in five or six days, to see that brood is not started; in which case they should be removed and replaced with empty ones, the former to be set away until the brood is chilled, before they are put on the top, as maturing brood will darken the combs.—(*American Agriculturist.*)

Bath and West of England Society's Meeting at Croydon.—The show-yard will be opened to the public from ten o'clock in the morning until seven in the evening on Monday, May 31st, Tuesday, June 1st, Wednesday, June 2nd, and Thursday, June 3rd, and from nine o'clock in the morning until six in the evening on Friday, June 4th; care being taken that no cattle or other objects of interest shall be removed from the yard until after three o'clock on that day, and no poultry until five o'clock.

DEATH OF MR. FIRTH'S PRIZE SILVER-GREY RABBIT.

In a letter we have received Mr. Firth states—"I write to say that my young prize Silver-Grey buck died shortly after arriving home from the Hull Show. Before his death, and on my first opening the hamper, I at once wrote to Mr. A. Hudson, the Secretary of the Hull Show, stating that my Rabbit was fast sinking, and requesting particulars of its condition whilst at the Show and at his departure. This brought a brief note from Mr. Hudson, in which he only states that my 'two letters were to hand,' and that 'the contents of which' he had 'noted.'"

Not having received any further communication from Mr. Hudson, and having ascertained that the death was occasioned by some irritant poison, Mr. Firth concludes his letter to us by adding—"I hold the Committee of the Hull Show responsible for damages which I have sustained, and I shall certainly demand justice."

Drilling Glass.—Few who have not made the trial would credit with what facility glass may be perforated in any desired direction by means of a common drill applied in a proper manner. Small circular holes in glass sheets or cylinders are often required by the practical student, who does not care to have recourse to the "shop" for every little job. Supposing it to be desired to bore a hole through a glass sheet, such as might be employed in the construction of a plate electrical machine. A perfectly flat board should be provided, on which the glass may be rested, and a small depression made with a bradawl exactly in the centre. If a piece of boxcloth be placed over this board and fastened down tightly by tacks at the sides, all danger of breakage through inequality of surface will be removed. The position of the hole having been decided upon, the glazed surface of the glass (the skin) is grazed at that point by a scratch

or nick with a three-square file. The glass is then placed on the board with the marked spot exactly over the depression. A good steel drill fixed in the stock of a common bow or Archimedean drill, and of the dimensions suitable to the hole required, is to be dipped in oil of turpentine and then into fine emery. Placing the point of the drill over the marked spot, the operator proceeds to communicate rotary motion, without, however, exerting any considerable pressure, especially towards the end of the operation. It is by no means necessary that the drill should be excessively hard: even a copper drill, if duly supplied with emery and turpentine, will do the work effectually. Should it be desirable to produce apertures of considerable diameters, such as from a quarter of an inch upwards, it is advisable to make some little change in the arrangement. Thus the drill must be grasped both above and below by a "collar" to prevent any change of position while rotating, and the head of the drill should be weighted by means of a hinged lever, which is fixed by the hinge to any convenient spot and weighted at the other extremity, the head of the drill-stock supporting it in the centre. By this means an equable "feed" is secured. Instead of a steel drill, a brass or copper tube of the size of the aperture required is fastened to the stock, which, for this purpose, should work with a bow. By moistening the tube constantly with a solution of camphor in spirits of turpentine, and feeding with fine emery, a true and smooth aperture may be quickly cut.—(*English Mechanic.*)

OUR LETTER BOX.

Chickens Cramped (*R. H. T.*).—Your chickens die of cramp. If they are brought up on wooden, brick, or stone floors they are the cause. That will probably explain to you why the greenhouse did not afford a cure. If you will put the hens in a sheltered spot on the earth with plenty of dry road grit to scratch in, and feed well on bread and milk, chopped cooked meat, chopped egg, and curd, with some beer to drink, we think you will stay the cramp among them. If you cannot alter your flooring cover it some inches deep with grit or even sand.

Fowl House (*A Constant Reader*).—For eighteen Spangled Hamburghs your house may be 12 feet square and 10 or 12 feet high, 3 feet of brickwork from the floor, above that wood. The brickwork need only be 4½ inches, or 9 at the outside. It must be well ventilated under the roof. There should be glazed windows, one at each side. They should open in the summer. We find the Bridgewater tiles very good roofing. The door should face to the south or the west, and should be in a corner.

Golden Pheasant Hybrids (*Alpha*).—The instances of a Golden Pheasant crossing with any other bird are very rare. We know only of three instances, and they were all with common hen Pheasants. If you are disposed to try we should advise you to put the Golden cock Pheasant to a Golden or Silver Sebright Bantam hen. If you have leisure and convenience the best plan you can adopt is to set some Golden Pheasant eggs and some Sebright eggs under the same hen. Let them be brought up together and never separated. It will be a long process, as you cannot depend on the cock Pheasant to breed from till the second season.

Call Ducks (*T. H. T.*).—You may not have been cheated. It is probably a drake that has assumed hermaphroditic plumage, or sported in moulting. We have known a Duck assume the curly tail, and we have known a drake moult only half its plumage, failing to attain its nuptial plumage during the whole year. These vagaries are not very uncommon. Take for instance the hen-cock among Pheasants; the alteration of comb, hackle, and tail in common fowls. We once had a Widgeon that missed his male plumage in moulting, but grew a curling crest and mane.

Supply of Ducks' Eggs (*S. S.*).—There is little doubt that if all the Ducks' eggs are put under hens they will produce twenty-four ducklings, even allowing for some bad ones. Something depends on the breed. The Aylesburies are very good layers, and if they are kept we should expect more.

Judges of Pigeons at Hull.—In our report of the Hull Exhibition our reporter omitted to state that the Judges of Pigeons were Capt. Hill, Ealing, and F. Gresham, Esq., Sheffield.

Foreign Owl Pigeons.—"*Foreigner*" wishes to know the names of the prizetakers at York.

Canary (*M. H. F.*).—The substance is only mucus.

Canary Wheezing (*A Reader*).—Your bird is attacked with asthma, or in a slow consumption, not an uncommon matter with Canaries, especially when kept and suspended near the ceiling or in front of a window. Birds so kept in a room where fire or gas are used at certain periods, and the birds having to endure the chilling night air are so weakened as to be continually casting or throwing off their feathers, or otherwise attacked with disease. Whether your bird's illness has been brought about in a similar manner is not for us to say, but we know many instances where the lives of many good birds have been shortened through a want of knowledge in keeping them in good health. One very important point you inform us of, that of occasionally giving your Canary a "lump of sugar." For what reason? Is it because the bird utters a sound resembling the word "sweet," that you so indulge it with sugar? To a certainty you have done your pet more harm than good. We have often been pained when noticing birds in cages hung up high in heated rooms. If anyone wishes to try the experiment of breathing with difficulty let him elevate himself upon a chair or table, and then he will know the kind of air a bird has continually to endure. There is no wonder at birds being afflicted with panting and wheezing, for the air becomes poisonous and loses all elasticity. Under such circumstances disease is encouraged. The sugar not only impedes the breathing organs, thus producing the wheezing, but the digestive functions become interrupted. The appearance of the ruffled feathers and occasional distension are signs of nature labouring under difficulties. During the bird's illness you may discontinue the rape seed for a time and give Canary seed, linseed, and groats; administer one or two drops of castor oil, and supply a bread-and-milk diet for two or three days; afterwards let it have a free diet of watercress, small salad, and dandelion; now and then a little crushed biscuit, and half a teaspoonful of sherry wine in its water fountain, besides keeping the cage in a rusty nail, will tend to strengthen the sufferer. Stale bread soaked, the water afterwards freed from it, and half a dozen drops of cod-liver oil added as an occasional change. Supply grit, sand, and a small piece of salt in the place of the sugar; keep the bird free from draught, and the cage covered over during the night whilst the bird is so unwell.

Book (*T. P.*).—Mr. Pettigrew's second edition is just out, price 3*s.* 6*d.*

Best Hives (*F. J.*).—Your question is a difficult one to answer, especially as you do not say whether you want straw or wooden hives. Mr. Pettigrew, Sale, near Manchester, who is a most successful bee-keeper, finds large straw hives the most profitable. If you want such write to him for particulars. Mr. Abbott, of Hanwell, near London, N., will supply you with excellently made wooden bar-framed hives for cottagers at a very low rate. If you obtain a model you can doubtless have them made to suit your own wants from some village carpenter or basketmaker in your own neighbourhood. Experience will be your best guide as to what is the best hive for your own purposes. We ourselves do not believe in the existence of any "best" hive. This is the very best time in the year for the purchase of old stocks, but you must be quick about it now. Bees rarely fly beyond a radius of one and a half mile from home, although they have been traced much further to good pasturage.

Commencing Bee-keeping (*B. V. A. H.*).—If for profit and little trouble, use Woodbury's hive, and have a swarm of common bees put into it next month. To prevent swarming in a common hive is very difficult, and to a beginner almost hopeless.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. March and April.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg	deg.		deg.	deg	deg.	deg.	deg.	In.
We 31	30 560	51.1	47.2	N.	43.8	59.5	46 2	77 4	43.2	—
Th. 1	30.551	47.7	44.0	N.E.	44.7	55.4	43.8	77.1	42.5	—
Fri. 2	30 475	46.7	41.6	N.W.	44 8	55.8	42.5	97 6	41 8	—
Sat. 3	30.060	47 6	44 6	S.W.	45.2	53.7	39 6	82.0	38 3	0.090
Sun. 4	29.675	47.5	45 4	S.W.	45 3	59.4	43 3	106.4	42.8	0.010
Mo. 5	29.277	48 7	46.2	S.W.	46 2	59.4	45.4	105.3	43 9	—
Tu. 6	29 465	48 5	43 9	W.	45.8	57.2	40 6	103.1	37.3	0.200
Means	30.009	48 3	44.7		45.1	57.1	42.9	91.7	41 3	0.300

REMARKS.

31st.—Rather dull morning, bright in the middle of the day; very little wind.

April 1st.—Dull morning, bright before noon, and a very pleasant day.

2nd.—Beautifully bright till 1 P.M. and all day, finer than any day for some weeks.

3rd.—Dull windy morning, bright about noon; windy at night.

4th.—Rain in the night and early morning, but fine before 9 A.M; very bright till 3 P.M., then dull; a little rain between 6 and 7, but a fine night.

5th.—Windy and wet early, but fine before 10 A.M., and very bright from that time to 5 P.M., then dull; but a fine starlit night, though windy.

6th.—Bright from 10 to 12.30, then a few drops of rain, and a sharp though short shower a short time after; but fine evening and night.

The temperature has risen about 4°, and the weather on three or four days been very bright and sunny, but the wind is still cold and trying.—G. J. Symons.

COVENT GARDEN MARKET.—April 7.

We have no change to report in the markets, the supply and demand being of the average condition for this season of the year. A few more Strawberries and some better Grapes can be obtained. English Pines are in very little request; the latest from St. Michael's being of excellent quality.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	2	6	to 3	6	Mulberries lb.	0	0	to 0	0
Apricots dozen	0	0	0	0	Nectarines dozen	0	0	0	0
Cherries lb.	0	0	0	0	Oranges ℔ 100	8	0	12	0
Chestnuts bushel	10	0	20	0	Peaches dozen	0	0	0	0
Currants ½ sieve	0	0	0	0	Pears, kitchen dozen	2	0	3	0
Black do.	0	0	0	0	dessert dozen	8	0	12	0
Figs dozen	0	0	0	0	Pine Apples lb.	2	0	6	0
Filberts lb.	0	0	0	0	Plums ½ sieve	0	0	0	0
Cobs lb.	0	0	2	0	Quinces dozen	0	0	0	0
Gooseberries quart	0	0	0	0	Raspberries lb.	0	0	0	0
Grapes, hothouse lb.	12	0	20	0	Strawberries ℔ oz.	1	0	2	0
Lemons ℔ 100	8	0	12	0	Walnuts bushel	8	0	12	0
Melons each	0	0	0	0	ditto ℔ 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes dozen	3	0	to 6	0	Leeks bunch	0	4	to 0	0
Asparagus ℔ 100	8	0	12	0	Lettuce dozen	1	0	2	0
French bundle	6	0	20	0	Mushrooms pottle	0	9	2	0
Beans, Kidney ℔ 100	2	0	3	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	0	0	0	0	Onions bushel	3	0	6	0
Beet, Red dozen	1	0	3	0	pickling quart	0	6	0	0
Broccoli bundle	0	9	1	6	Parsley doz. bunches	6	0	8	0
Brussels Sprouts ½ sieve	3	0	4	0	Parsnips dozen	0	3	1	0
Cabbage dozen	2	0	3	0	Peas quart	0	0	0	0
Carrots bunch	0	6	0	8	Potatoes bushel	2	6	6	0
Capsicums ℔ 100	0	0	0	0	Kidney do.	3	0	6	0
Cauliflower dozen	4	0	8	0	Radishes doz. bunches	1	0	1	6
Celery bundle	1	8	2	0	Rhubarb bundle	0	3	1	0
Coleworts doz. bunches	5	0	8	0	Salsafy bundle	1	6	0	0
Cucumbers each	1	0	2	0	Scorzonera bundle	1	0	0	0
pickling dozen	0	0	0	0	Seakale basket	2	0	3	0
Endive dozen	2	0	0	0	Shallots lb.	0	3	0	4
Fennel bunch	0	3	0	0	Spinach bushel	0	0	4	8
Garlic lb.	0	6	0	0	Tomatoes dozen	0	0	0	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish bundle	0	0	4	0	Vegetable Marrows doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	APRIL 15—21, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m. h.	Sun Sets. m. h.	Moon Rises. m. h.	Moon Sets. m. h.	Moon's Age. Days.	Clock after Sun. m. s.	Day of Year.
15	Th	Linnean Society at 8 P.M. Royal Society at 8.30 P.M.	58.4	37.8	48.1	6 af 5	54 af 6	8 af 1	48 8	9	after	105
16	F	Royal Institution at 8 P.M.	57.4	37.1	43.7	4 5	55 6	25 2	3 4	10	0 14	106
17	S		58.2	35.8	47.0	2 5	57 6	38 3	14 4	11	0 29	107
18	Sun	3 Sunday after Easter.	56 8	38 0	47.4	0 5	59 6	50 4	24 4	12	0 42	108
19	M	London and Victoria Institutes. British Architects'	59.0	35.6	47.3	58 4	0 7	1 6	34 4	13	0 56	109
20	Tu	Zoological Society at 8 30 P.M. [Society at 8 P.M.	60.8	35.1	47.7	55 4	2 7	13 7	44 4	●	1 9	110
21	W	Royal Horticultural Society, Early Rhododendron [Show.	59.5	37.2	48.3	53 4	4 7	26 8	55 4	15	1 22	111

From observations taken near London during forty-three years, the average day temperature of the week is 58.8°; and its night temperature 36.5°.

GERANIUMS FOR BEDDING.

WHEN recommending lists of Geraniums it would be a very good thing if persons could also state what other sorts they had tried. For instance, "Age" recommends very strongly Warrior, Vesuvius, Lucius, Claude Lorraine, and Creed's Seedling. Although Vesuvius is spoken so highly of I cannot see its merits; it is, no doubt, hardy, tolerates bad treatment, and blooms freely for a certain time, but the truss is small. It does not endure sun and dry weather, and it seems to me very inferior to either Corsair, Jean Sisley, Star of Fire, Grand Duke, or Soleil. Claude Lorraine I long since discarded, but I never gave Lucius a fair trial. Creed's Seedling with me was never either a good yellow or a good green, and the flower only an inferior Tom Thumb. Maia, owing to the courtesy of the raiser, I shall be able to try this year, as he kindly sent me some cuttings in the autumn, and I have only lost one plant.

Again, when Mrs. Pollock is recommended as a Golden Tricolor, has "Age" tried Sophia Dumaresque, Lady Cullum, William Sanday, Macbeth, Edith Pearson, Queen of Tricolors, &c., against it? as, so satisfied am I of the superior merit of all those I have named, that Mrs. Pollock is no longer grown here, as not retaining its leaf-colour in hot sunny weather. William Sanday seems likely to be about the best bedder we have.

I had intended to have given a description of a few of the best of those on trial here last year, but have put it off till too late for this year, and hope that some of those who study the different kinds of bedding Geraniums will, at the end of this season, make out a list of the best. My impressions at present are in favour of the following:—

Dark Scarlet.—Edward Sutton, General Outram.

Scarlet.—Star of Fire, Corsair, Grand Duke, Soleil, Jean Sisley.

Crimson Scarlet.—Bayard, Vesta, Bonfire.

Crimson.—Mrs. Vincent, Charley Casbon.

Cerise.—Violet Hill, Lady Kirkland, Arthur Pearson.

Rose.—Rose Bradwardine.

Deep Pink.—Contessa Quarto, Mrs. Holden, Mrs. Ffytche, Pink Queen, Mrs. Musters.

Lighter Pink.—Master Christine, Mrs. Lowe, Mrs. Upton, Rose Rendatler.

Lilac Pink.—Amaranth, Florence Durand. Gloire de Corbenay is certainly one of the best of that section, but it is difficult to find a place for it in a set of beds.

I wish some one could raise another Lady Kirkland with a stiff flower stalk, there is no more continuous bloomer. It has the merit, too, of not seeding, and the trusses are large; but it has a very slender footstalk, and the trusses straggle about the bed.

The following seem to me the desiderata for a bedding Geranium—flowering section:—

1, Colour bright and decided.

2, Truss large; pip good size and substance, capable of standing sun and wind.

3, Footstalk firm and strong, not too long nor too dwarf.

4, The individual flowers on long stalks, so that the truss should not be too crowded.

5, Freedom of blooming.

6, Spreading habit of growth.

7, Foliage uniform in colour, not too much zoned; a bright clear green is much better, as a rule, than a horse-shoe.

8, Continuance and duration of bloom is more valuable than mere profusion at one time.

The Geranium which with me unites these qualities more than any other is Violet Hill. It is, however, very dwarf, and many persons discard it because it requires care and attention; and it will not succeed with an ordinary cold-frame treatment. Mrs. Lowe, as a light bright pink, is quite as good in its way.

It will be noticed by many that plants gradually acquire a dwarfer habit of growth the longer they are cultivated; many which were too strong and vigorous in their second and third year from the seedling state, as William Underwood for instance, often lose this vigorous growth and become more compact.

Amongst Tricolors I have already named the best. In the Bronzes I do not like either those that are too dark, as Black Douglas, or those that turn green, as Her Majesty, Beauty of Calderdale, or Beauty of Oulton. The best in point of colour are Crown Prince, Impératrice Eugénie, Reine Victoria, Marquis of Lorne, and Earl Rosslyn; but they all want good soil and generous treatment. I have not succeeded with any Silver Tricolor as yet.

Among the Whites I prefer May Queen, Flower of Spring, Miss Kingsbury, Castlemilk, Pearl, and Mrs. Lennox. Beaton's Variegated Nosegay did not succeed with me. Bijou is too upright in growth, and Alma is inferior to those named.

There is quite a plethora of good Pinks since Mr. Pearson of Chilwell sent out so good a batch in 1872; and it will be a difficult thing, I think, to decide between the merits of such sorts as Contessa Quarto, Mrs. Ffytche, Mrs. Holden, Miss Young, Miss Skipworth, Mrs. Augusta Miles, Mrs. Musters, &c. Of this we may be perfectly certain, that the older pink varieties, as Christine, Pink Perfection, Countess of Rosslyn, and some others, will have to give way.

I may say, in conclusion, that having tried a great number of pure Zonals for bedding, as Clipper, Dr. Lindley, Roi d'Italie, &c., I have quite come to the conclusion that no pure Zonal is so good as those that have some of the Nosegay blood in their veins, and that Stella and Black Dwarf, though perhaps now discarded, have done much to improve our bedding Geraniums; and as I look forward to the time when this rage for carpet bedding with formal cut patterns will again give way to the best stamp of flowering plants of each section, I still hope that our raisers of bedding plants will continue to

improve the quality of flowers as well as turn their attention to foliage.—C. P. P.

NOTES FROM MY GARDEN IN 1874.

GLADIOLUS.

"It is a long time," was the burden of a recent note, "since you have given us anything about the Gladiolus in the Journal." Well, it is: time runs on, many things crop up, and one forgets how long it is since one has written. Moreover, there is not now a great deal to say; and what I have to write may perhaps as well be written under this heading as under any other. And yet I am more perplexed than ever as to what to say about it. I believe it to be the most disappointing and perplexing flower we have to do with. I never had finer-looking beds for some months, never finer blooms, and yet at the time of lifting never more disease. "Hold!" I hear someone say; "don't discourage people and frighten them out of growing them." To this I cannot subscribe. Truth must be told, and no suppression of facts can be justifiable when we are writing on the merits or demerits of a flower. It is impossible to praise too highly the beauty, the variety of its colouring, and the grandeur of appearance of the Gladiolus. But all this must be weighted by its fatal facility to disease; and I know of more than one grower who says, "Year after year I determine to give it up, and yet notwithstanding my losses I cannot quite make up my mind to do so."

I had last year as usual three beds containing about four hundred bulbs. These were from the following sources: 1, The most considerable quantity my own saving; 2, a goodly number of imported bulbs; 3, a few of Mr. Kelway's highest-priced roots; and 4, a few from my friend Mr. Banks. Amongst the French roots were the set of eighteen sent out by M. Souchet, and of these I found the following to be the best:—

De Michel.—A large and very long spike; rose slightly veined with lilac, and the throat lined with dark carmine.

Le Vesuve.—A magnificent colour, fiery red, large and brilliant, evidently of the Meyerbeer type. I look upon this as a grand flower, although my friend Mr. Banks says that Meyerbeer will be a more lasting flower.

Murillo.—Another very fine spike; cherry red, light centre, all the petals lined with white, with large white spot on the lower petals. A grand variety.

Psyche.—Very large spike of light satiny rose; lower petals darker rose. This variety was considered by M. Souchet the best of the year, but it is not so to our English taste.

These were the best four. Of the others I rather liked Sirene, a fine spike, light salmon rose; Ambroise Verschaffelt, light rose, flamed red. Albion and L'Unique Violet never did anything; indeed the latter never appeared above ground. Merveille was fine but not remarkable, and of the others I can give no very good account. From Mr. Kelway I had Victory, Lady Bridport, Medina, and Ball of Fire, and am sorry to say I was disappointed in them. There must be something in his way of growing them, for I had seen them very fine with him; with me they were the reverse of that.

In former years I had advocated the use of charcoal, considering that it might act as a preventive of disease. I regret to say that such an idea has been entirely dispelled by the experience of the past year. In my three beds I had some treated with charcoal and others with sand, but I found no difference in the attacks of the disease. The English-raised seedlings were attacked by it, although it is stated by some that they are of a hardier constitution. In fact it is one of those mysterious disorders about which we are entirely in the dark. I saw it last year everywhere. My friend Mr. Banks suffered most severely. I saw it extensively in Somersetshire, and a little of it at Fontainebleau, while Lord Hawke wrote to me that he felt thoroughly disheartened by its prevalence in his best beds. No vegetable physiologists seem to be able to tell us what it is and what its remedy is any more than they can about the Potato disease. Indeed the thought has struck me whether they may not be analogous; and if so, may it not be that as unquestionably the autumn rains have in some mysterious way to do with the prevalence of the disease amongst the one, they may not have also in the other? We cannot lift our Gladioluses early as we can our Potatoes, but it might be worth while to try on a small scale whether the covering of a bed, and so preventing it receiving the autumn rains, might preserve the bulbs from disease. The fact that the French growers do not suffer so much from it would rather bear this out. Their autumns—autumns in which the rich produce of their vineyards are gathered in—must be, and indeed we know are, much drier than ours. At any rate it might be worth consideration, and on a small scale I shall try the experiment this year; for while it would be hopeless for the man who grows his tens of thousands of bulbs to attempt anything of this kind, the amateur who is obliged to be satisfied, as I am, with a few hundreds, may well try to do something to save his most valuable bulbs at least from destruction.

I am disposed to think that mulching is more serviceable than I once thought it was; and at Mr. Kelway's I saw the beds very thickly coated with manure, and we all know what spikes he is able to produce.

We have now but one exhibition where we may hope to see them properly represented in the metropolis—that to be held at the Alexandra Park by the Metropolitan Floral Society in the latter part of August. The Crystal Palace is too late except for monster growers like Mr. Kelway, and the miserable amount of the prizes at South Kensington will preclude amateurs from competing. I hope, then, at the Alexandra Park, where a large sum is offered for them, there will be a good competition and a grand display.—D., *Deal.*

PEARS.

My experience is that Pears vary very much according to soil, climate, and the kind of stock on which they are grafted. Some which are excellent on the Quince are worthless on the Pear stock, and *vice versâ*. They also vary much according to the season. Some sorts do best in a dry season, others in a wet one; so that a Pear which may be first-rate one year will be only second or third-rate another year. This last year, for instance, I found the following sorts, which are usually excellent, were only second-rate—Fondante d'Automne, Beurré Bachelier, Joséphine de Malines, and Easter Beurré, which last was very much spotted; whereas the season evidently suited other varieties—*e.g.*, Conseiller de la Cour, Baronne de Mello, Doyenné du Comice, Winter Nelis, and Bergamotte Esperen, which last is only just over.

Last year I fruited just sixty varieties of Pear. Of these there are only five now remaining in the fruit-room—Catillac, Uvedale's St. Germain, Verulam, Beurré de Rance, and Bezi Mai. This last was sent out as an eating Pear, and perhaps it may prove eatable once in half a century; but it is a very good bearer and an excellent stewing Pear, and will keep till July, or even longer if required; but out of these sixty varieties, to my mind there was no question as to the one which was first in excellence. It was a Pear which came to me from France, with the label partially obliterated; it was the "Fondante de C——." So far I could make it out, but no further, and accordingly I called it Fondante de Comice; but I do not see a Pear of that name on any list, and the Pear itself answered to the description both in appearance and season of the "Fondante de Charneu," with its six *alias* names in Dr. Hogg's "Fruit Manual," page 291. It is a variety which, as far as I can ascertain, is unknown in this district, but perhaps some of your correspondents from other parts can give some information about it. This last season it was certainly the best of my sixty varieties, and I think the best Pear I ever met with.

As I sometimes see inquiries about "fruit-rooms," my experience on this point may be of use to some of your readers. I had a small wooden barn about 14 by 10 feet. I had it lined with half-inch deal boards, and filled the space between the two boardings (about 6 inches) with sawdust. This has answered very well, and the thermometer was never below freezing point in the coldest nights of last winter, and the fruit has kept perfectly well till now.—William Lea, *Droitwich.*

TROPÆOLUM CANARIENSE.

This useful and very pretty climber, growing to the height of from 10 to 12 feet, and producing hundreds of canary-yellow flowers, being a half-hardy annual, requires to be raised from seed under glass. The most successful way is to sow the seed from the middle of March to the present time in pots, pans, or boxes. When large enough the seedlings may be potted off into pots varying in size from 3 to 6 inches. Three plants might with advantage be put into 6-inch pots, trained on stakes, and gradually hardened off in any cold frame or other protection, when they may be planted out in many suitable ways. They may be trained on pillars, porches, or any kind of fancy wood or wire frames.

Last summer I saw a very good effect produced with this

Tropæolum on a serpentine border 2 feet wide and about 60 yards long. Amongst other plants in the border were six Irish Yews 7 feet high; on each of these were trained three plants of this Tropæolum, and although exposed to severe gales of wind, it looked very pretty, and was admired by many.—William Laurie.

AURICULAS.

April, as the derivation of its very name imports, is truly the month that opens the year. To the florist it is the entrance into bloom of his first-born favourite—the Auricula; the flower which, let me confess, is with me the heiress, the princess royal of my floral love.

From this time forth till brown October comes, those of us who grow "the round" of florists' flowers have now no break in our Daisy chain. No two links in this succession are alike; and although I know not one flower in the world that stays long enough to tire us, still there is rare richness and an intended refreshment in complete changes. The Auricula, Polyanthus, Tulip, Ranunculus, Pink, Rose, Carnation, and Picotee, which form the length of the lovely chain with me, leave me naught to envy though much to admire in other gardens.

I have no "popular" flowers except the best of the Roses in fat beds (they will lie in any depth of "feathers," these luxurious beauties), all my non-florist flowers being quaint herbaceous oddities—plants that have quietly withdrawn themselves from the glare of gardens *à la mode*, but take kindly to the shelter of an old place like mine, where they seem to know they are welcome for their own strange beauty's sake, and are not rated at the common estimate of the world for how much of "effect" they are worth. But I must keep to the objects for which I write.

One is to apprise all interested in the culture of the Auricula that the National Auricula Society's next show will be held on April 27th (Tuesday), in Manchester, and in conjunction with the Spring Exhibition of the Manchester Botanical Council, to whom are due the hearty thanks of florists for the encouragement given to the public exhibitions of florist flowers. As a rule these have of late been virtually private, being held among the growers of a neighbourhood and their friends.

Another matter on which I would say a word is the question raised lately by "G. S.," whether an Auricula with a tall rootless stem could be cut down with safety. It is a constant practice of my own to do so, and the operation is perfectly safe. Not only is there no danger to fear, but considerable profit to expect. Some sorts are fond of making long stems—*e.g.*, Catherina, Lord Lorne, and Mrs. Sturrock; but a collection should not be allowed to run into this habit. Cut off your rootless top, and rub the wounded surfaces with powdered charcoal. Pot this top firmly—very firmly, and keep the soil but moderately moist; cover it with a broken wineglass or a cheap tumbler, or pot the cut piece low enough for a square of glass to lie over the pot top. See that no wet lodges in your plant, and keeping it thus close and cool you may justly expect it to prosper. It can root from any ring on the stem from which a leaf has sprung, and when the heart shows signs of growing-out admit air freely. The old topless but rooted stem can hardly fail to break some dormant eyes, and so you gain at both ends. I will here state that most of my fine stock of Page's Champion has been won by my twice beheading plants, striking the rootless head, and then receiving that back as a fine short-necked plant while the old "carrot" has gone on, throwing offsets at the eyes that were dormant before. I have plants at this moment undergoing this little device. The only notable failure I can recall was with a plant of Jupiter—my only one, and I cut it because of unsoundness, hoping a little at the top would come round, but I could not save it. It is wonderful how this plan of striking an Auricula top will answer, and if you can save a single ring of stem you are not past hope with it.

I have had pieces like this strike root out of the very leaves near their base, and I have a gem of a seedling now thriving after that narrow escape. Again, I have cut rootless heads off in the autumn, kept them under a small glass, had them root during the winter, and go on with the rest in spring, the same as offsets. There is a time for all things, and when "G. S." wrote his query the spring foliage of Auriculas was so far advanced that a rootless top would suffer more than if taken off in quieter times. Often a plant makes two hearts after the bloom, and a two-headed plant cannot take both trusses to an exhibition. Not choosing to wait till both heads are rooted, I save a year by sharply cutting the whole stem down, allowing each head half the roots, rubbing all wounds with powdered charcoal. I have seen Auriculas beheaded and struck, and the old stem, or carrot, fairly quartered, and all the quarters giving out eyes.

It may shock my friend "D., *Deal*," to hear of Auriculas being so knocked about. He will handle his with tenderer touch; but a friendly correspondent of mine, the Rev. Mr. Tymons, seems to side with me. It is no new thing I speak of, but a practice pursued by growers with less advantages than I have. I am thinking of my friend Benjamin Simonite of Sheffield among others, who in the very thick of that black, and bleak, and dismal air grows the Auricula right well, besides the Carnation and Picotee. It was of him bringing flowers in fine order to an exhibition that a friend once said, "Here comes the man that grows his flowers up engine-house chimneys!"

Talking of exhibitions and meetings reminds us always of those who will not be there next time—of the friends we have lost between while. We shall not see Robin Lancashire with us any more. He is one more genuine florist of the old school gone; his age 77; his Auriculas the last flower in his possession as with so many old florists. The sort known as Lancashire Hero was raised by him; it is a name familiar as a household word among growers, and we shall grow it a long time yet.—F. D. Horner, *Kirkby Malzeard, Ripon.*

THE ORCHID-HUNTER IN BURMAH.—No. 3.

Pegu and its neighbourhood are so rich in many fine Orchids, which are not so abundant in any other part of Burmah, that before continuing a description of the various Dendrobia it may not be uninteresting to enlarge on the different Orchids found in that district. By placing a description of these plants side by side, and giving a description of the climate in which they all grow, a fair idea may be arrived at of the treatment required to grow them to perfection.

Pegu is probably the hottest part of Burmah, the average temperature during the day in the shade from June to the end of March being 80°, and in April and May 90°. The variation of temperature during the day is not great—about 5° more or less. The nights are comparatively cool, the heat being 10° less than during the day. There are a few showers in April, and from the end of May to the beginning of October a very heavy rainfall, averaging 150 inches during the season.

The Orchids of Pegu are common to the lower parts of Burmah, and are pretty freely scattered throughout the different districts; the Orchids of Upper Burmah, and again of the mountains of Burmah, being quite distinct in character, and in the circumstances in which they are placed by Nature.

Vanda teres is the Orchid of all others that most strikes the eye in travelling through Pegu. When in flower the way in which it lights up the trees on which it grows is very remarkable, making the trees look as if they themselves were in full bloom. This plant is almost invariably found growing on Lagerstromia reginæ, a large tree, bearing beautiful mauve flowers, which are generally out of blossom by the time the epiphytes inhabiting it come into bloom. This tree has very smooth branches, to which the roots of the Vanda cling. The stems of Vanda teres are cylindrical, frequently 30 feet long, often branching, and throwing these branches into the air well above the trees on which they grow, so that when they flower in midsummer the whole top of the tree is a mass of blossom. The foliage is terete, rigid, colour dark green, more like the foliage of the Luisias, and entirely distinct from that characteristic of the other Vandas, with the exception of Vanda teres Andersoni, which is a variety of Vanda teres, and Vanda Hookeri. It bears splendid spikes of flowers, frequently ten flowers on a stem. The flower is large, 3 inches across, varying from rosy red to pure white tinged with yellow. If Vanda teres can only find a dead or leafless tree of Lagerstromia reginæ to grow on it is then indeed in its glory; it embraces the tree with its tendril roots like a beautiful creeper, completely covering the stems, and forming a glorious and gigantic bush of flowers.

Success in the cultivation of this plant in England has been limited, and perhaps from the foregoing description the horticulturist may gain a few suggestive facts: First, that the roots of this plant like the cleanest and smoothest of barks to grow on; secondly, that the plant loves the greatest amount of light; and lastly, that the more sun and heat it has the more freely it grows and flowers. Cultivators in England generally con-

sider this a shy-flowering plant. In cultivation abroad it grows well on a smooth pole, the pole having plenty of surface for the roots to attach themselves to. The roots are wonderfully numerous in good healthy plants, so that a good surface for them to grow on is a great requisite. More specimen plants of this grand Orchid would be seen if the importers sent larger plants home, and sent them at the beginning instead of the end of the resting season.

Vanda teres Andersoni is also found about twenty-five miles north-east of Pegu, it is identical in growth with V. teres, but smaller in habit. It bears similar flowers, and grows on the Mimosa trees. It is a rare plant in Burmah, but said to be common in some parts of India.

A variety of Vanda gigantea grows here in enormous masses. It bears spikes of yellow flowers of thick waxy substance, the petals being marked across with bars of red. Unlike the other Vandas, which all like the light, this plant appears to attach itself to trees having a heavy foliage. It is beautiful when in full flower in June and has a smell of Apples, and is commonly known in Burmah as the Apple-scented Vanda. It would not be acceptable to the general cultivator of these plants in England, as only those having enormous houses could grow it satisfactorily. To those who have it, it is worth noting that it flowers and grows freely in a shady place. Although growing on shade-giving trees this plant is always found on trees in the open country, generally on trees growing on swampy ground.

In the same swamps, on the yellow Mimosa tree, flourishes a very pretty Camarotis—Camarotis pallida, with scandent habit and hard blunt leaves bearing racemes of yellow flowers. Those who know Camarotis purpurea can form a very good idea of C. pallida, the two being almost identical in habit. It is very abundant, and flowers during the early rains. Fine specimens of it are well worth growing in our Orchid houses in England. It takes up little room and likes plenty of heat and moisture, and should be grown on cross-bars of teak with a little moss. It has a most distinct season of rest; but as the leaves shrivel during the dry season, it is probable that in home cultivation it would improve the plant to give it sufficient water to prevent it from shrivelling. Camarotis purpurea has been found in this district, but it is exceedingly rare in Lower Burmah. It is said to abound in Arracan and in the Delta of the Ganges; it is a well-known plant bearing rose-coloured flowers. The same remarks regarding cultivation apply to it as apply to Camarotis pallida. These varieties of Camarotis are found clinging to the outside twigs of the trees, and are rarely found growing on any branches thicker than a small cane.

On the same trees as the Camarotis, and in great abundance, is found a very pretty pink Sarcanthus, a variety of Sarcanthus filiformis. It has terete leaves on opposite sides of the stem, which is cylindrical. The stems and foliage are alike rosy purple in colour, the racemes of flowers being pink. It is a very elegant plant most interesting to the amateur, but probably of not sufficient character to induce the importer to send more than a few stray plants of it home. It grows best on cross-bars of teak, under the same treatment as that suggested for growing Camarotis.—E. S. B.

ROSES.

"Cornubia" accuses me of omitting Prince Camille de Rohan, or, as many call it, Camille de Rohan. I have never to the best of my recollection omitted it from my selections. If I have done so, it has been a lapsus. I thank Mr. Peach for saying (page 271) "I must acquit Mr. Radclyffe of never having recommended Prince Camille de Rohan, as I remember at one time it used to be a favourite." Now turn to October 1st, 1874, and you will see that I and twelve other amateurs included it in the fifty Roses of the election, and seven others omitted it. The following amateurs named it:—Mr. J. Ellis (39), Mr. R. Davis (47), Mr. Tapner (36), Mr. Quennel (34), the Rev. G. Arkwright (17), Mr. Barrel (35), the Rev. Alan Cheales (42), the Rev. J. B. Camm (47), Mr. R. W. Beachey (15), the Rev. H. Dombrain (40), Mr. R. Robson (45), the Rev. R. N. Milford (22), the Rev. W. F. Radclyffe (26). The other amateurs, six in number, who did not elect it, were Mr. James Mayo, the Rev. C. P. Peach, the Rev. E. N. Pochin, Mr. John Scott, Mr. J. Hinton, Mr. J. F. Curtis.

"Cornubia's" assertion that I said La France was a weak grower is equally erroneous. I said it was a "good grower, very hardy, with fine foliage," but not a free bloomer here. I recommended it be placed under glass, as more likely to bloom freely.

Edward Morren and Felix Genero will stand in the catalogue for many years. Granger and Damaizin need not be disheartened. All comers here admire specially these two Roses; and Baron Chaurand is rightly called by Mr. W. Paul "one of the best dark Roses." Louis Van Houtte does not do well on Manetti, but admirably on Mr. Prince's seedling Briars.

I believe I stated that the line of Marie Baumann this year in the fine land of the Dorset nurseries was miserable, where Madame Vidot was stout and Madame Rivers from 3 to 5 feet high.—W. F. Radclyffe.

FRUIT PROSPECTS in the NORTH of SCOTLAND.

After one of the most severe winters which has been experienced during the last thirty years, spring and fine weather have at length set in. The gardener's time is now a busy time, but he has the satisfaction to feel that his prospects of fruit are favourable.

Peaches, Nectarines, and Apricots are fully in bloom, and give promise, with fine weather, of an abundant harvest of fruit. Pears, Plums, and Cherries are rapidly bursting their buds, and will shortly be richly laden with blossom. Apple blossom promises to be unusually abundant, and with a favourable season the crop of 1875 must be very large. Small fruits, so far as can be seen, are also showing exceedingly well.

Vegetables are generally late, the young Cabbages being smaller than when planted-out in October. They have been covered with snow almost continually from the end of November to the end of February. The snow has afforded great protection to vegetables; Broccolis, Brussels Sprouts, and the different sorts of Kales are now abundant and good. Altogether, if the winter has been trying the spring is encouraging, and we are hopeful of a fairly prosperous season in the northern district.—David Long, *Banffshire*.

VINES UNDER LOW TEMPERATURE SHANKING.

Mr. Taylor in one of his practical articles has incidentally advocated a low temperature for setting Grapes, and as constituting an important element in preventing shanking. On page 229 that cultivator states his practice to be a "minimum temperature of 55° for all Vines, including Muscats, till the flowers are set, and 5° lower will do them no harm at any time." Now that is 50°, and it is certain that many Grape-growers would consider that fatal to the free setting and prosperity of their Grapes.

It is well known that some of the best Grapes are produced under a much higher mean temperature than that recommended by Mr. Taylor, but that does not prove him wrong even if the higher temperature so given proves itself right. With a comparatively high night temperature under which Grapes are successfully produced, other contributing conditions will be found associated, such as inside borders carefully tended and managed, or outside borders judiciously warmed. High temperature in such cases loses relative value, and indeed may not be high at all in the sense intended by Mr. Taylor.

On the general question, it is quite certain that Mr. Taylor in advocating a low temperature and steady movement in the first stages of a Vine's growth has struck an important chord, in harmony with sound philosophy and proved to be successful. The tone of his article must commend itself to the common sense of impartial cultivators, as striking directly at the great contributing cause of Grape-shanking. There may be other and local causes which invite this fell scourge, but a too quick swelling of the buds and a pulling out of the young shoots—for that is an expressive term to use—is the one great governing cause which not only brings shanked Grapes but brings also, with equal certainty, red spider. By that practice flimsy foliage and a yellow-green wood destitute of tissue is produced, and hence a pasture ground for the pest is provided.

In dealing with Vines generally, whether in pots or not, and under whatever circumstances, and with whatever variety, safety from shanking and certainty of clean foliage and perfect fruit undoubtedly lies in a low temperature and steady movement in the first phases of Vine life. When once the roots are at work in a free and natural manner, and affording a full supply of food, then push on as you like in reason, but until then a golden motto is "Steady, boys, steady."

It is the practice of the best cultivators who have unbounded

heating means at hand to let the first steps be steady steps, knowing they will gain in the end both in the matter of time and quality. Not long ago in looking through the Burghley vineries the Vines were observed to be breaking sturdily and strongly under a very cool temperature. "Gently at first is my plan," said the veteran Mr. Gilbert, and the system has proved him right in past years, and will as certainly prove so again in the season now ensuing.

For ten years, in the case of Black Hamburgh Grapes, the practice of the writer has been studiously to keep the night temperature down to 50° until the bunches were thinned. Many times the thermometer has been 4° and 5° lower than that, even when the bunches have been in bloom, and never once has injury resulted. Never once has red spider been seen, and not one berry in a thousand has shanked. Canon Hall Muscat has been set admirably at 55°, and infinitely better than under a higher temperature. Of course atmospheric moisture and systematic ventilation have been carefully managed and regulated according to circumstances. This is only a lesson which outdoor Vines teach, and their teaching was followed. They set freely under the same low temperature, they never shank, and are seldom infested by red spider—never if kept well supplied with water.

Sometimes the effects of thrips are mistaken for shanking. Even one or two of the insects will ruin a bunch of Grapes, and their presence is frequently not observed. They will nibble round the bunch-stem just at its junction with the shoot, and check the flow of sap which should go to perfect the fruit. Two years ago I observed great damage from this source. The foliage was clean and healthy, not an insect to be seen on the leaves, but the bunch-stalks were attacked. Sometimes one and occasionally two and three of the thrips were found paring round the stalk, and would have certainly ruined the crop if they had been permitted to enjoy another week's grazing. They will not start there in the case of Vines with flimsy foliage, but only when the leaves are stout and leathery do they choose the bunch-stalk as the most vulnerable point of attack, and commit damage before they are seen.

To what has been said on low temperature a word of caution may be needful. Unpractised cultivators—learners who are feeling their way in Grape-growing—may imagine they have been working too high, applying too much heat. Go on gently as you are for this season. Make no sudden 10° drops as a remedy; that were too ruthless, but if Grapes do not satisfy this year try a lower mean the next and expect improvement. In the meantime give air early, yet carefully, regulate moisture with temperature, and above all keep a sharp look-out for the very first inroads of insect pest, as, if nothing else will cause the Grapes to shank, thrips will certainly do so, and often before they are observed.—A Surrey Gardener.

BEDDING CALCEOLARIAS.

The bedding Calceolaria has of late years proved itself to be one of the hardiest of bedding-out plants, and in many places now occupies a third part of the space allotted for summer bedding. Being anxious to keep as many of these as possible, I procured a new frame, placed it on a border facing the west, into which I put 4 inches of rotten dung; on this I placed 6 inches of fibrous soil and white sand mixed. On the 25th of October I inserted nine hundred Calceolaria cuttings. Notwithstanding the severe winter—there having been more than once 32° of frost—and they having no covering but the glass and an occasional inch of snow, the plants are growing vigorously, and have been topped repeatedly.

After the middle of the present month I shall put them into trenches to make room for more tender plants. This method I carried out last spring with some success by digging-out trenches 2½ feet wide and 15 inches deep, into which I dig rotten dung and a little river sand. When lifted for transplanting in the flower garden the very smallest balls of soil would have filled a 4-inch pot and they received no check by planting. With some more dung put into the trenches they become very suitable for growing Celery.—William Laurie.

Borage as a Decorative Plant.—I enclose the photograph of a plant of the above (for which I am indebted to Mr. Batters, gardener, Chilworth Manor) to show that it answers well for decorating purposes. Its deep blue flowers and dark green and handsome foliage show out well as seen in the photograph. It is suitable for grouping with other plants or as a single specimen in the conservatory. It was taken up from the open ground with a few more small seedlings equally as good in the autumn, potted and placed in a warm house till it flowered.—F. H. Froud.

[The photograph is exceedingly good, and we are sure the plant thus well grown is effective when grouped harmoniously with others.—Eds.]

VIOLETS: VARIETIES AND THEIR CULTURE.

To-day I send you a box of Violet blooms which I have just gathered. They are all grown out of doors and unprotected, which accounts for some of the double blooms being imperfect. I think there are fourteen varieties—three of single White, six of single Purple, one of double Purple, one of double Red, one of double White, one of double White and Lilac, and one of Lilac. The Russian, you will see, are now past their perfection. As a variety it has no equal, I think, for midwinter flowering. Then the kind known as the London blooms next. It has a more compact flower of deeper colour than any other; its leaves grow high, are earlier, and have a far paler green, are produced with the flowers, and thus protect the latter from frost. The Czar are very fine and beautiful in March, not before or after, being naturally coarse I think. It has but a limited time of beauty, with leaves darker than others. Odorata pendula, of New York I believe it to be, as a spring bloomer has, in my opinion, no superior, with blossoms as large and larger than The Czar without its coarseness, and which also expand more fully on a very long slender stalk, and with rather pale foliage. The two small blue flowers I send are an offshoot of a small variety, which may be the common wild Violet; it has very dark green leaves. The double blue, and double white, with lilac back, bloom profusely out of doors, and are most beautiful all April; but the Neapolitan double red and double white I find bloom but poorly unless protected. The single white, I imagine, is but a variety of the wild Violet.

There are several other kinds I am aware, which, added to those I have the pleasure of sending you, surely form a family of easily-grown hardy plants, that would be more cultivated were they more generally known. I may truthfully say I have gathered, literally, bushels of bloom this last winter and spring, some of which have found their way to the London Flower Mission for distribution in hospitals, and no flower can be more suitable for such a purpose. The Violet, for its delicious scent, early and continuous blooming, and easy culture, is universally a favourite amongst flowers, and must become more so when its many beautiful varieties are recognised. Is not the reason of its partly hidden merit due to the fact that it is not a paying subject with the florist? for the reason that when once supplied with a plant or two no more are required, because it is so hardy and self-increasing that a stock is thus procured without the hazard which attends the propagating of many plants.

My mode of culture is simple enough. After the blooming season I take rooted offshoots from the parent plant, which I place rather close in rows, each row being 2 feet apart, and in autumn I bank the rows up (as it were) with a small quantity of rotten manure, and then leave them alone.

There are plenty of other hardy flowers on which I will speak at length.—Henry W. Cooper, F.R.H.S., *Surrey*.

[All the varieties sent to us are distinct and well grown. Florists, we think, do not cultivate Violets largely because the demand for them is very limited. They are not gay flowers for the border.—Eds.]

THE GREAT HORTICULTURAL SHOW AT ANTWERP.

In the most excellent and able report in your last number on our Horticultural Show there is one omission on which, for the honour of our city and that of our Royal Horticultural Society, I beg to call attention. It concerns the beautiful and rare specimens you noticed as contributed by your countryman, Mr. B. S. Williams. It is quite true they were not entered for competition, and could not in consequence come under the public notice of the Jury; but the Board of Directors of the Royal Horticultural Society immediately met and voted the award of a medal of honour to the exhibitor as an unanimous expression of admiration and gratitude.

It is to the fact that this decision about such an exceptional distinction only being placed on Mr. Williams's collection of

plants just after your reporter had completed his notes, that the omission is attributable.—J. Everaerts, *a Director of the Royal Horticultural and Agricultural Society in Antwerp.*

ANEMONES AND THEIR CULTURE.

When I look at the lovely beds of semi-double Anemones now in blossom in my garden, the intensest brilliance side by side with the softest harmony of colour, I think how much those lovers of spring flowers miss who do not treat these beautiful blossoms with somewhat more care than is usual. Besides their beauty of form and exceeding richness and variety of tint, which I scarcely dare to dwell on lest it should seem exaggerated, the Anemones possess the great charm of producing blossoms all through the dark days of winter, to which their brightness forms such a cheering contrast. The bed I now speak of has supplied me with continuous bouquets from last October up to the present day, the size of the flowers of course increasing with the advance of spring, which is the meridian season of their beauty; but if there is a mid-winter open-air bouquet more lovely than a flat vase filled with scarlet Anemones along with blossoms of the large Christmas Rose white as a snowdrift, I can only say I have never seen it.

Observing so many spring flowers praised in your Journal I have often wished to say a word for the Anemones, but the old saying, "No Irish need apply," has hitherto deterred me. However, last week having shown my flowers to several florists, their hearty exclamation that they had never before seen such beautiful Anemones, tempts me now to give my mode of treating them, in the hope that others may have equal enjoyment in their blossoming.

Having saved the seed the preceding May, in March or in April I select a piece of good ground in a warm situation. I have it well dug and made fine, and then over the surface I have spread a layer of fresh cow droppings collected from the pasture; this is dug in from 5 to 6 inches deep, and then some well-rotted leaf mould is mixed with the upper 2 inches of the bed; it is raked fine, and all is ready for sowing. I then take the seed and mix it with my fingers in some sand that has a little moisture—just enough to make it adhere to the seeds, and thus separate them. I next sprinkle the seed thus prepared over the bed, not too thickly; and having ready some fine mould, I with the hand shake enough over the bed to cover the seeds, but not bury them.

Whenever weeds appear they should be pulled up while they are yet so small that their removal will not disturb the Anemone seedlings, which are tardy in appearing and slow in their first growth; but by August they should be sending up flower-stems, a few only at first, but increasing every week, until by the end of October the bed is well filled with blossoms, to continue so all winter until spring adds fresh vigour to its splendour.

I enclose some blossoms pulled to-day, so that they may speak for themselves.—L. L.

[We never saw more beautiful specimens of the semi-double Anemone.—Eds.]

PEARS—EASTER BEURRÉ.

Thanks to the contributors of our Journal for their various hints on different kinds of Pears. If thought worth recording, I send the experience of a gentleman on the ripening of Easter Beurré Pears. He planted a tree fifteen years since, and when it began to bear he carefully packed the fruit in dry sand and placed in a warm cupboard, but by this plan they were never worth eating except by cooking them. His new plan he thus describes: "Having had no success in ripening Easter Beurré Pears, after gathering them, last autumn I laid them up on shelves in a shed with Apples, covering them with cloths, where they have been all the winter, and for the last few weeks have ripened perfectly. They are of large and even size, and very valuable. The tree is against a wall."—J. W.

Sales of Plants.—Mr. J. C. Stevens sold by auction on the 8th inst. 447 lots of Orchids, which realised nearly £1500. The specimens which sold for the highest prices were Dendrobium Falconeri, £5; D. crassinode, £5 5*s.*; and "a grand mass" of D. Wardianum—seventy bulbs, besides young growths, one hundred guineas.

On the 9th Mr. Stevens sold 318 lots of the late Mr. Philpot's stove and greenhouse plants for £470. Anthurium Scherzerianum was knocked down for £7; Azaleas for from £5 to £6 10*s.*; Erica Cavendishii for £10; and Hedaroma tulipifera for £21.

THE BOUQUET AND HOW IT IS MADE.

As I have had some experience in bouquet-making I should like to add a hint to "J. H.'s" article. I must differ from him in one or two points, but will admit that the flowers named are good for the purpose. I find it impossible to make a good-shaped bouquet with the finest copper wire, as it is not stiff enough to hold the flowers in their place.

Now the way that I proceed to make a bouquet is thus:—I procure some iron wire stiff enough to bear the weight of a Camellia in any position. I cut this in lengths of about 7 inches, and next cut my flowers, and wire every one, whether it has a long stalk or a short one. I next have a stick about the size of a cedar pencil, and 7 inches long, and bind the centre flower to it. This forms a handle, and a good foundation to bind the others to. I use the Indian grass for binding, as the wire cuts the stalks of the flowers and Fern too much.

I use two sizes of wire, one very fine for wiring double Primulas, Hyacinths, and pips of double Geraniums, &c.; the other stout for bouquets. By so doing I can make a good bouquet with a very few flowers, which is a great saving in the winter months when flowers are scarce.—F. B.

THE ROYAL HORTICULTURAL SOCIETY—A GROWL.

Week after week have I intended to write to you, but have put the matter off in the hope that there would be no occasion for this letter, but I have hoped in vain. It is now the 10th of April, 1875, and not one penny of the prize money which was gained last year has been paid by the Royal Horticultural Society, and I write in the hope that if you take the matter up we poor exhibitors may receive our money.

I consider that the action of the Council in this matter is perfectly dishonest. In their report and statement of accounts they put down the prize money for 1874 as if it had been paid, and this report is presented at the annual meeting, and, I presume, passed. Now, what right has the Council to issue a false report? for I maintain that the balance-sheet is a false one which leads the members to suppose that the prizes have been paid when they have not.

Rose-showing is a source of great expense and discomfort to most men, but to me it is unusually so. I have to drive twenty-six miles at night to catch the London mail, and then have to travel all night and land at that most inhospitable arcade of the Royal Horticultural Society, those "*barbara regna*," in a state of starvation, and not even a cup of tea can be procured for love or money. Then, when the day is over and we exhibitors come to take away our boxes we have regularly to fight to prevent every bloom being taken by the crowd; and when you are showing in all the classes your boxes are widely apart, and it is impossible to protect more than one stand. I was asked at the last show a dozen times whether I sold my blooms, and one gentleman calmly asked me, "Do you not come from Paul's?" Mr. Eyles saw a stranger calmly take every Rose out of a stand, and on being asked whether he owned those Roses said, "No; I thought I might help myself!" A lady positively took my Roses away from my box as I was giving them away. Any exhibitor who was there will bear me out in this, and will endorse every word I have said about the arrangements.

Now, after all this trouble, discomfort, and expense we who have gained prizes are left to "whistle for them," and this from the Society which calls itself "Royal." "The Royal Horticultural Society of England" can condescend to a line of action which would not be taken by the poorest and most insignificant cottage gardeners' horticultural society. I call it simply a breach of faith, and hope you will expose it, and then, perhaps, the Council will be ashamed of themselves, as they ought to have been long ago.—A Disgusted Exhibitor.

[The preceding communication needs no comment from us. The conduct of the Council of the Royal Horticultural Society is most unworthy. If it offers prizes, even if the funds of the Society are not sufficient to pay the prizes, the Council ought to pay them out of their own pockets. They could be com-

pelled to do so in a County Court. As to the raids upon the Roses, a notice forbidding such pillage should be exhibited, and policemen be in attendance to secure that the notice is obeyed.—Eds.]

VIOLETS—A NEW VIOLET.

At the close of February last a lady sent me flowers by post from plants growiog at Parma. Their freshness was surprising, and none the less so the doubleness, size, high colour, and perfume of the blooms. It is the colour that I wish to particularly note—a decided purple, not so deep as we have it in the Double Purple King and others, but the purple shown in the spots of Queen of Violets. The flowers were followed by a dozen pots of plants, and I felt fortunate in having secured another and better form of Neapolitan, the stems being longer and stouter than in that variety; but though the opening buds on the plants promised blooms equal in colour to those received by post, they opened paler and paler each succeeding bloom, until now they are very little deeper in colour than the sky-blue Neapolitan, which we have in frames and outdoors. Other plants came to hand from Paris, taken from the open ground, had the pale blue of the Neapolitan.

Can any of your correspondents inform me if the size and deep colour of bloom of the Parma Violets and their length of stem is due to climate and soil, or to some peculiarity of treatment? We all know of the change of colour effected in the bloom of Hydrangeas; by the application of iron filings and a solution of alum the rose of that flower is changed to blue. The same thing occurs when the plants are grown in peat soil, or an admixture of peat containing oxide of iron.

Plants and blooms have also reached me by post of a new Violet—viz., Prince Consort, raised by Mr. Lee, Cliveden, who is also the raiser of Victoria Regina. I had an opportunity, therefore, of forming an opinion both of bloom and plant. The plant, as it appears to me, is not so strong in foliage and habit as Victoria Regina. The leaves are more like Czar, and do not droop as in Victoria Regina, but are equally fine and glossy. The flowers are a little larger than those of Victoria Regina, are a little paler in colour—a pleasing bluish purple—with petals more rounded, the flower altogether having the form of a well-formed Pansy, whilst it has stout long flower-stems, and the perfume is delightful. It is a fitting companion for Victoria Regina, and as great an advance upon that variety as that is upon Czar.

Victoria Regina both in frames and outdoors is much better than Czar, the flowers are larger, the petals have greater breadth and substance, are more even and circular in outline, and are of deeper colour. To the raiser of this great improvement in Violets I am indebted for a number of blooms of seedlings raised from Prince Consort, the size of all being greater than anything we have in sweet single varieties, and of as many shades of blue and purple. Many of them have the outline, the smoothness, the rays and eyes, the substance, and not far beneath the size of Pansies, all having in the highest degree the fragrance of the Violet. One I particularly noted as not dissimilar from Viola incana, being exactly like it in colour; others must partake of the nature of V. cucullatum.

These are splendid specimens of Violets, and when once seen are not soon forgotten, their fine form, substance, colour, and fragrance alike impressing one with their superiority over the older varieties.—G. Abbey.

EUPHORBIACEÆ.

More than 2500 species are included in this botanical family, and nearly each of them has in its sap some portion of one of the most virulent of poisons—a resin called by chemists Euphorbium. It is in the diminutive weed common in our gardens—the Spurge, or Wart-wort, Euphorbia helioscopia, as well as in the Euphorbia tree, found at Dufar and elsewhere in northern Africa, depicted in the accompanying woodcut.

A recent traveller informs us that, being at Dufar in the neighbourhood of the gigantic Euphorbium, he requested one of the negroes to go with him to the tree. The fellow hesitated, excused himself on various pretences, but at last consented to go. It was evident that he was in extreme fear, and that his terror increased the nearer he approached the tree; he lifted his large eyes several times to its branches, and apparently entertained the notion that he was treading on forbidden ground. He stood by without uttering a syllable, but in a high state of nervous excitement, while the traveller made his sketch; but when, on its completion, the artist suggested breaking off a branch as a memento of the visit, the terror of the negro became extreme. His gesticulations were irresistibly comic, his language utterly incomprehensible, but it was clear enough that he felt sure some dire penalty would follow the commission of such sacrilege. At last he said in a sort of moongrel Arabic, "Touch it, and you'll die—it will kill you—it always kills." But the branch was broken off, and the sap, a milky-looking fluid, burst out far more copiously than the traveller had anticipated, and penetrated his outer clothing in an instant. He soon understood the cause of the negro's terror. The sap was a deadly poison, and he was assured that if he had any wound or scratch upon his body the result would be fatal. Fortunately for him he had not.

The Euphorbium, of which we give an illustration, grows on the mountain of Kaçane. It measures about 80 feet in circumference; its height is about 30 feet. The trunk is a piece of hard firm timber; the branches are cyliudrical in form, and interlaced.

There are other arborescent Euphorbiæ strikingly peculiar. Euphorbia balsamifera, the milk of which is so innocuous and sweet that it is thickened to a jelly and eaten by the inhabitants, is a very remarkable tree. The trunk, though very crooked, at first rises without branches, but afterwards divides into a great number, which again divide into innumerable smaller branches. Leaves are nowhere to be seen but at the extremity of the branches round which they are placed. They are short, lanceolate and narrow, grey, and furnished with a little thorn at the point. The Cordon (Euphorbia canariensis, the juice of which is as acrid as that of the other Euphorbiæ) is a still more wonderful production of nature. Its dark green branches, completely leafless, rise all at once from a common root, bend in a semicircle down to the ground, and then rise again perpendicularly at various distances from the first root, so that the tree resembles an enormous lustre with a number of branches bearing lights. Each branch is as much as half a foot in circumference, and is a prism of four, or more generally of five sides. Their edges along the whole length are set with pairs of short prickles. At the extremity of these thick, angular, fleshy branches break forth the scarlet flowers, which at a distance are like burning coals. Higher up the older branches divide, and form separate smaller lustres on the larger one.

According to Endlicher, Euphorbia officinarum is the plant that King Juba discovered in Barbary, and named after his physician, who was brother to Musa. It is a native of Africa, Arabia, and India, and is one of those Cactus-looking species, without leaves, with erect, thick, fleshy stem and branches, having the appearance of candelabra; each branch is terminated by a red flower, and is covered with knobs, from which issues a sharp spine. It is called Furbiurne by the Arabs, and Dergmuse by the inhabitants of Atlas.

The above-named species are thus described by Meyen, Dr. Hogg, and in Messrs. Cassell's "Magazine," who have obliged us with the accompanying woodcut. We now descend to a few of the species cultivated in our gardens. The Spurgeworts are generally characterised by quaint form or habit, there being very few which can be regarded as beautiful flowering plants. Yet we find a trio of species worthy of general cultivation, and to these we draw timely attention.

E. splendens is a Madagascar plant, which adds to singularity of form flowers which are highly attractive. These are produced in clusters of two to six, on short footstalks. They are of a pleasing soft scarlet colour, and for button-hole bouquets are extremely suitable. The plant is of a prickly erect shrub-like habit, and may be grown as a wall plant in the stove, or be trained as a specimen to stakes or a wire trellis. It is of easy culture, and blooms profusely over a long period of the year. It is propagated by cuttings put in at the present time. Short stubby side shoots with a little old wood at the base of each are the best. They should be laid for a day to dry—as the cuts bleed profusely—before they are put in. They require sandy soil and a brisk heat. When struck they require to be grown in the full sun of a well-heated structure. The plants must be watered with care until the pots are filled with roots, and must be kept comparatively dry during the winter season. When once established the plants will continue to bloom for a number of years, and are useful as affording cut blooms of stout texture, and of a colour hardly to be found on any other plant.

E. punicea is a somewhat rare yet a beautiful species of this family. It is a native of Jamaica, and although it has been known to our gardens for more than a century, it is but seldom

seen, probably on account of its difficulty of propagation. The plant is of shrubby habit, and its dazzling crimson-scarlet bracts render it extremely attractive. The plants should be dry almost to flagging before the cuttings are taken off, when they will strike in brisk heat in gritty soil. The plants should be grown in sandy loam containing a liberal admixture of nodules of broken bricks and limestone. It will thrive in a greenhouse during the summer months, but at other times requires a stove temperature. It is a bright and attractive plant, worthy of general cultivation.

E. jacquiniæflora. We have no need to sound the praises of this deservedly-popular winter-blooming plant; its merits are well known, and its charms are universally appreciated. It should be grown in every garden which affords conveniences

Fig. 67.—Euphorbia tree at dufar.

for its culture, so elegant and attractive are its highly-coloured sprays, for purposes of cut blooms especially. The plant is of straggling habit, but is tractable and amenable to different forms of culture. We have had it planted out and covering the back wall of a vinery, and have gathered therefrom immense quantities of sprays. We have had it in glowing pyramids trained to wire trellises, and we have grown it by dozens in small pots for filling jardinettes and other indoor decorative purposes. Short-jointed cuttings strike freely in sand under bell-glasses at this season of the year, and every cutting will flower in the autumn. In order to have compact plants we have struck the cuttings in May in thumb pots and transferred several of these plants into a 6-inch pot, and in the winter have had masses of scarlet not more than 9 inches in height. The plants should be grown on shelves quite close to the glass, and should have copious supplies of water throughout the summer. Loam with lumpy peat and charcoal is a suitable compost. The drainage must be perfect; for while this plant requires plenty of water, any approach to a stagnant soil is fatal. It must, moreover, not be overpotted. For covering the back wall of a

stove or temperate house few plants are better suited than this, as wherever it can have light and heat it will grow and bloom profusely. It is quite safe in the winter months if the temperature is not below 45°, and at that season very little water is required to keep the plant in health.

NOLANAS.

Our illustration (fig. 68) is not a good typical representation of a class of hardy annuals which contribute an air of gracefulness and a feeling of repose amidst the more brilliant masses of colour in the garden where they have a place. They are convolvulus or bell-shaped flowers in which blue in varied tints predominates, and their low trailing habit of growth renders them suitable for many purposes of decoration. While they cannot be regarded as occupying an important rank in the floral category, or be classed as prominent or indispensable in creating any distinct effect, yet, like annuals generally, they have a charm all their own, and are more beautiful than many plants which are more extensively cultivated.

They are natives of Chili and Peru, the oldest variety, N. prostrata, having been introduced in 1761, and the newest, N. lanceolata, about 1862. N. atriplicifolia is the variety best known; it is in colour blue, white, and yellow, and is a pretty graceful annual. N. cœlestis is a pure light blue of a pleasing tint. N. paradoxa violacea is a deep lavender violet, with a yellow centre, and is very gay. The best, however, of them all is N. lanceolata. It was introduced by Messrs. Veitch & Sons. The "Botanical Magazine" for 1862 contains a beautiful coloured plate of this plant, and describes it as a charming addition to our hardy annuals. It was discovered by Mr. Cumming at Coquimbo. In colour it is a rich mazarine blue with a white throat, and in shape is similar to a Petunia. The colour of this flower is almost unequalled in its way, and we may add as a point in its favour that it is a fashionable colour.

Fig. 68.—Nolana lanceolata.

It is very rarely that this pleasing class of flowers are honoured with a notice except in seedsmen's catalogues, yet we make no apology for drawing attention to them here, and also in giving an example of their features, for the beautiful colour alone of the variety last named merits attention, and will afford to the many admirers of blue flowers a tint which they cannot easily find in any other plant, texture, or pigment.

The notice is further opportune as being the proper time to sow the seed. It simply requires to be sown where required to bloom, or in pots and transplanted. This plan is advisable with any cherished annual where slugs are prevalent. The Nolanas grow less than a foot high: hence are suitable for growing near the margins of borders. By their trailing habit they are suited also as drooping plants, and are further well adapted for window-box culture. To those who enjoy the raising of simple flowers from seed, and who have pleasure in seeing a reward of their own hands within a few weeks of sowing the seeds, will instinctively turn to hardy annuals, and amongst these we would advise them to no longer neglect, if they seek a charming blue, Nolana lanceolata. For children's gardens especially—and we would offer fare for all tastes and requirements—these simple, attractive, and easily-cultivated flowers should be adopted, as, besides affording pleasure, they are instructive in imparting a lesson, and in cultivating a pure and refined taste. Thus even annuals may have a use.

NOTES AND GLEANINGS.

A rumour having obtained credence that the Council of the Royal Horticultural Society do not intend paying the prizes of 1874, we are requested by the Secretary to say that such a rumour is unfounded in fact, and that the prizes of 1874 will be paid as soon as the funds of the Society will admit of it.

—— New editions of Gordon's "Pinetum" and Paxton's "Cottager's Calendar of Garden Operations," have just been published.

—— At the International Exhibition to be held at Philadelphia in 1876, our Government have decided that the interests of the British section shall be entrusted to the Lords of the Committee of Council on Education. Anyone wishing to exhibit should apply to R. Cunliffe Owen, 5, Craig's Court, Charing Cross.

HARDY VINEYARD AT CARDIFF CASTLE.

There are instances on record of the cellars of some of our British nobles being pretty well stocked with wine the pro-

duce of Grapes grown in the open air on favourable spots on their own domains—such, for instance, as at Arundel Castle. The Most Noble the Marquis of Bute is at present engaged in preparing a piece of ground on his Cardiff estates for the formation of a hardy vineyard on a somewhat extensive scale. The ground selected is about seven miles from Cardiff, at a place called Castle Coch, an old ruin which his lordship is having partly restored. This castle is situated on a tract of limestone some five hundred acres in extent. It is well wooded to the north, east, and west, but lies quite open to the south, overlooking the Bristol Channel. The field selected here for the vineyard is about five acres in extent, having a good fall to the south. It is of a light loamy soil, 2 feet deep resting on the limestone rock, and requiring no artificial drainage. The only preparation necessary before planting is trenching, and slightly manuring with stable dung. The Marquis, in his earnestness to put the practicability of open-air culture of Grapes in favoured spots in this country to fair proof, sent his intelligent gardener, Mr. Pettigrew, on a tour of inspection among the most noted French vineyards last autumn, preparatory to his lordship's desire being put into practice. Two thousand Vines will be planted this year, and the same quantity next year, and so on until the vineyard is stocked. They will be planted 3 feet apart each way; and it is proposed not to allow them to grow to a greater height than 3 feet. The varieties to be planted are Melier Blanc and Gromier Noir, in equal proportions, these being, from Mr. Pettigrew's observations on the Continent, the two most likely to succeed—they being very hardy and prolific. To further test the matter, 150 Chasselas Fontainebleau are to be planted on the castle walls. We earnestly hope the Marquis's experiment may turn out very successful. It may be added, the French system of culture will be adopted generally.—*(The Gardener.)*

NOTES ON VILLA AND SUBURBAN GARDENING.

Window Gardening.—Of the different phases of town gardening there is probably not one which gives the observer more of an impression that flowers are grown for the very love of them than when he sees window after window from the lowest to the highest in the street tastefully decorated with growing plants. The outside furnishing of them involves a little trouble, though the season for that is of short duration, yet the success which attends those who make an attempt at this form of gardening are paid for their trouble by a few beautiful flowers, as well as a cheerful aspect given to the whole of the house internally and externally.

Though the season is advancing it is yet too early to trust tender plants outside; however, the time is come when preparations may be made with the view of placing them outside some time next month. By that I mean the plants may be potted and grown on, and whether window boxes or any other vessels are used for the purpose the plants should be placed in them now, and grown for the present in some sheltered place, or in a frame, and perhaps for a time in the greenhouse, and have them established before placing them in their positions. They will then give an effect at once, which is an advantage to aim at, particularly as the season for such plants is short.

Plants for indoor window decoration may be trusted near the glass with confidence night and day, as no frost may now be expected severe enough to reach them, particularly if the window has a good sunny aspect. There is one very important thing to take note of which operates against the well-doing of outside window plants, that is the summer's sun playing with full force upon the pots or boxes, burning as it were the young fleshy roots so necessary to the health of the plants, and causing such a rapid evaporation from the soil as to incur in ordinary cases too much watering for the health of the plants to be good. To obviate this injury in some measure the boxes should be in two—that is, the ornamental or outer box should be as a casing to the other, or, if pots are used, one should be set in another. This gives all the protection required, excepting that the surface of the box or pot should be mulched or covered with moss or cocoa-nut fibre to prevent evaporation.

There are many ways of decorating a window with plants, and there is a nice variety of plants fit for the purpose; but taste in arranging this must be to some extent guided by the shape and size of the window to be decorated. It is quite natural to suppose that the plants inside if arranged along the front, with the tall plants at the back, will present a broad face to the outside; but if indoor and outdoor decoration is attempted in the same window this plan would do away with the effect of the outside; but if the plants indoors were reduced to a low number, say six on each side, the most of which would be best not more than from 6 to 18 inches high, leaving the centre of the window clear to view the plants outside, then if these were arranged as to height in conjunction with those inside, and on the side also, gradually bring the dwarfer towards the centre; this would give a view of two banks of plants in flower on each side, which would look remarkably well.

Then, again, there might be a slight wire narrow trellis to run over the window against the wall, which would look well covered with the common Canary Creeper, or any other suitable plant; or a trellis might be fixed of a triangular shape on each side of the window, say 2 feet in width at bottom, terminating to one wire at the height of the window, leaving the top without any. This plan would look well if covered with Ivy, and would afford some shelter from the winds that do plants harm by cutting by the windows of narrow streets.

The mixed style of planting or arranging the plants seems to be about the best, because there is not room for much distinction of colours, and, besides, all plants do not thrive well at one time, and the mixed plan would ensure always some plants to be in flower, while the inside of the window might be filled with such plants as Pelargoniums, Calceolarias, Fuchsias, Hydrangeas, Heliotropes, and Balsams, and others of what are called greenhouse plants. The outside would be creditable in appearance if Stocks, Mignonette, Scarlet and Variegated Geraniums, Lobelias, Calceolarias, and Verbenas were used. They are pretty sure flowerers, and although there are many other plants which would claim some notice as suitable, they would require to be supplemented by others frequently, as they would not stand that treatment long without exhibiting signs of distress.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

KITCHEN GARDEN.

All early spring-sown crops are making healthy progress. Although February and March have been cold months very little rain has fallen, and when cold weather prevails in these months all out-of-doors crops do best when the surface of the ground is dry, as there is always plenty of moisture in the ground from the autumn and winter rains. At Loxford the rainfall for February was a trifle over an inch, and in March but half that quantity fell.

The early Peas have grown up to the wire protectors; it has been necessary to remove these to the second sowing just coming through the ground. The rows were earthed-up at once and the sticks put to them. When they are so far advanced the sparrows seldom attack them. It is a good plan to put in some short sticks about a foot high first, and when the Peas have taken hold to use the taller sticks.

Cauliflower plants that have been under handlights through the winter are well advanced. The lights have been removed, and the ground forked over amongst the plants. The sowing that was made early in the season on a hotbed is not quite ready to plant out. To keep up a succession another sowing ought to have been made out of doors about the last week in March; but it is not possible to produce good Cauliflowers in July and August in our light soil, and after many failures the attempt has been given up.

The Lettuce seed sown under ground vineries has produced abundance of stocky plants; and a shower of rain, though it only moistened the surface of the ground, furnished an opportunity to plant out a quantity of them. Hicks's Hardy White Cos is the favourite: this variety, though evidently only a form of Paris White Cos, is certainly the best of the many selections of that excellent sort; its superiority of growth is already apparent. Ran the hoe through all ground occupied by growing crops, using the Dutch hoe for fruit borders, and the ordinary draw hoe for spring Cabbage and similar crops.

Sow Salsafy, Scorzonera, and Beet. The Beet need not be sown on rich ground, as medium-sized roots are preferable to large overgrown specimens. The others cannot be grown too strongly, but avoid sowing on ground that has been recently trenched if it has been manured with rank dung. Ground that had been trenched before Christmas, and the manure placed about a foot under the surface, is the most suitable for this crop. A sowing of Broccoli should now be made, comprising the earliest sorts. The bed of Globe Artichokes should now be forked over, removing all superabundant suckers from the plants as the work progresses; these will be useful to make a fresh bed, and if required for this purpose should be planted at once. The earliest-sown Celery must be pricked out on a warm border, allowing 3 inches between the plants. A small number of plants will be sufficient for the earliest crop, as so many of them run to seed even with the best management. Sow now for the latest crop in the open ground. Lettuce, Radish, and all small salading ought to be sown frequently according to the demand for them.

Now is a good time to sow herbs of sorts, such as Fennel, Marjoram, Basil, Borage, Thyme, Chervil, Savory, &c.; also to plant-out Sage, Thyme, Tansy, Mint, and Tarragon. The last is much used, and succeeds best in a dry border. With the next

sowing of Peas sow Round-leaved Spinach between the rows. The kitchen garden should now be neat and trim, the edgings of the quarters to be made up with a spade and cut off to the line, raking the alleys afterwards. Many persons leave trimming the Box edgings until May; but if time can be spared now it ought to be done, and all the walks to be cleaned and rolled.

FRUIT AND FORCING HOUSES.

Strawberries.—A succession of these ought now to be kept up until the fruit is gathered in the open ground. Any plants that were placed in the late vineries to start with the Vines ought to be removed into another house, as the Vines will soon shade the plants, and the Strawberry will do little good forced in pots if not placed near the glass and freely exposed to the sun. We have now a batch of Keens' Seedling (and the fruit is just ripening), which were started in a house the temperature of which was 50° at night; they were removed to the Pine house with a minimum of 60° or 65° after the flower trusses were thrown up. The flowers must be thinned-out as soon as possible. About nine fruit on an average is a sufficient number to allow on 6-inch pots. If the pots are on a shelf quite close to the glass, and facing south, the best way is to allow the fruit to hang over the pots without any support. If the pots are unfavourably placed as regards light and sun, then the fruit ought to be fully exposed above the foliage by tying it up to small sprays cut from any brush or faggot wood. It may be as well to say a word on watering. When the plants are in a high artificial temperature then the water that is applied to roots or leaves should be of the same temperature as the house, and no plants should suffer for want of water. Manure water is indispensable to the production of superior fruit, and the best is made from either cow or stable manure. We generally use cow dung for mixing with the water, because the compost at potting time is formed with stable manure; guano is sometimes used, but it is a bad stimulant for Strawberries in pots. We have also tried placing the pots in saucers to hold water; this is a considerable saving in labour, but the fruit will not be so good.

ORCHARD HOUSE.

The trees of Peach and Nectarines are now in flower, and as the weather has been so favourable a good set is almost certain. It is well to go over all the trees daily when they are in flower, some time in the forenoon, and just shake the trees gently to disperse the pollen. Air must be freely admitted at the time of flowering; a close damp atmosphere is fatal to a good set. Pears are also very nearly in flower. The fruit does not set so well under glass as that of the Peach. Dewing the blossoms over with clear water from a syringe on the morning of a fine day is a good way to scatter the pollen and to promote fertilisation.

Cherries under glass require a dry bracing atmosphere when the trees are in blossom, and if the trees are in pots they must be well attended to with water; the blossoms do not set well unless the trees are in favourable conditions. Peaches, Nectarines, and Plums succeed well in the same house. Cherries and Pears ought to be together, as a drier atmosphere is required all through the fruiting season.

CUCUMBER AND MELON HOUSES.

With the longer days and milder weather it is easy to maintain a minimum temperature of 70°, allowing it to rise to 80° or 85° from sun heat. In our house the pipes seldom require to be very much heated to keep up the necessary temperature, and yet half the quantity of evaporating trough is enough. Even Cucumber plants may be overdone with moisture. The plants are now syringed daily with clear rain water, applying it to the under sides of the leaves. Frequent syringing and judicious air-giving is the only way to keep the plants clean and healthy.

Melons are grown with a night temperature of 65°; the leading growths have been stopped, the lateral growths which furnish the female blossoms are trained to the trellis as they grow out, and when four or six female blossoms are in flower at once they are impregnated. In fine weather the plants are syringed daily; it is the only way to prevent red spider injuring the plants.

PLANT STOVE.

It is now good time to propagate by cuttings any of the soft-wooded or other rapid-growing plants. Thyrsacanthus rutilans should be propagated annually. The cuttings of the young growths root freely in loam and leaf mould in a high temperature; the numerous drooping panicles of scarlet flowers are very ornamental in early spring. The plants must be potted-on and grown in a high temperature all the summer and autumn. Eranthemum pulchellum is another very free growing plant, and is well worth attention for the profusion of pretty deep blue flowers it continues to produce all through the winter months.

Justicia is an extensive genus of plants that has fallen into undeserved neglect. Many of the species are very beautiful, and some of the best are winter-flowering. Cuttings of many hardwooded species may also be put in now; those most difficult of propagation should be potted in sand, placing a thickish layer of turfy loam or peat over the drainage. Gardenia florida strikes out roots very freely, but all hardwooded cuttings should be placed under bell-glasses or handlights.

We have been cutting-down Poinsettia pulcherrima and placing the plants in one of the late vineries to start into growth. They will grow away very freely in a high temperature, making splendid growths and handsome foliage; but it is best to place the plants in a greenhouse temperature after they are started; the growths here will be short and densely clothed with leaves.

Caladiums had also started into growth, and were removed to the Pine house. We like to have the plants near the glass, as the leaves have a tendency to be long-stalked if the plants are not freely exposed to light and air. These and the Poinsettias, as soon as they have made a little growth, will be shaken out of the pots, the balls reduced as much as possible, and the plants repotted, the large specimens in the same sized pots, and the smaller plants in a size larger.

Such Orchids as Dendrobium Bensoniæ, D. clavatum, D. McCarthiæ, D. Dalhousianum, D. densiflorum, D. Devonianum, and others of the same class, are showing their flowers, and the baskets and pots in which they are growing are freely watered with tepid water; indeed, all Orchids that have been at rest during winter may now be kept moist if they have not been overpotted. As nearly all the plants are starting into growth, a moist atmosphere and a higher temperature with shade when necessary is indispensable to healthy development.

Watch for the appearance of red spider on the young growths of Dendrobiums, some of the Palms, and other plants known to be attacked. If the plants cannot be syringed they must be hand-washed with soapy water.—J. Douglas.

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Manchester (National Auricula Show).—April 27th.
Jersey.—May 5th, Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.
Bath.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.
Crystal Palace Company.—Flower Show, May 29th; Rose Show, June 19th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.
Coventry.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.
Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.
Burton-upon-Trent.—June 16th. Mr. Wm. Shave, Bond Street, Sec.
Glasgow.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
Fareham.—June 23rd. Mr. H. Smith, Sec.
Exeter (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.
Wisbeach.—June 30th. Mr. C. Parker, Hon. Sec.
Maidstone.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.
Spalding.—July 1st and 2nd. Mr. G. F. Barroll, Hon. Sec.
Southgate.—July 3rd. John Miles, Esq., Hon. Sec., Southgate, N.
Durham and Northumberland.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.
Kilsby.—July 8th. Sec., Mr. C. E. Bracebridge.
Nottingham.—Rose Show, &c., July 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.
Tonbridge.—July 14th. Mr. W. Blair, Free Press Office, Hon. Sec.
Wimbledon.—July 15th and 16th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon. Sec.

TRADE CATALOGUES RECEIVED.

J. Backhouse & Son, York.—*Catalogue of Stove and Greenhouse Plants.*

Charles Turner, Slough.—*General Plant Catalogue for* 1875.

John Harrison, Darlington.—*List of New Roses.*

George Poulton, Fountain Nursery, Edmonton, London.—*Catalogue of Plants and Cuttings.*

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Cucumbers (*C. Morfett*).—Write to Messrs. Webber, Central Avenue, Covent Garden Market.

Pear Grafts (*J. Badgerry*).—Our correspondent declines parting with grafts.

Rhubarbs (*J. Hood*).—The Elford is scarlet-stalked; Britannia, dark pink; Randall's, dark pink; and Myatt's Victoria, crimson. We never heard of the Peach Rhubarb.

Begonia (*G. S.*).—It is a variety, and we cannot attempt to name varieties.

Paget's Engine (*Observer*).—Your note is an advertisement.

Stove without Flue (*H. T.*).—Whether a stove is heated by petroleum gas, coke, charcoal, or any other source of heat, if there is no funnel or flue to convey the fumes or gases produced into the outside air, the plants in the house will be injured, and in many instances killed.

Deodorising Sewage (*G. Hughes*).—The earth is one of the best of deodorisers. If the liquid be distributed by a watercart towards evening we believe there would be little or no offensive smell detectable next morning. Half a hundredweight of sulphate of lime (gypsum) might be mixed with each one hundred gallons of the sewage.

Ventilating Greenhouse (*Flycatcher*).—It is proper to give air by the back lights in the first instance at every period of the year, front ventilation being secondary to the top or back ventilation, and ought only to be given when the latter is insufficient to keep the temperature from rising too high. The Cytisus is C. racemosus.

Roses for Arched Trellis (*J. P.*).—Roses admit no rival, nor could they well be associated with evergreens, as the one would outgrow the other. We presume you will have access to the Roses outside as well as beneath the trellis, for grand as may be the idea of a walk beneath an arched trellis of Roses, the main of the beauty will be on the outside; in fact, very little of the Roses will be seen from the path when the trellis is covered. We should not have an arched trellis, only arches at every 9 feet apart and 2 feet in breadth, which will give you 7 feet clear space between each, and from the walk you will see the Roses on the arches in all their beauty. Over the walk directly in the centre you may have three wires connected with the arches, which would give what we think you need—a shady walk; but we should be content with the arches, and cover the bank or both sides with dwarf plants. By this plan you would have the Roses in view from the walk. The effect when in bloom would be very fine. Of Roses suitable for the trellis we may mention *Teas:*—Belle Lyonnaise, Catherine Mermet, Gloire de Bordeaux, Gloire de Dijon, and Madame Trifle. *Noisette:* Celine Forestier, Rêve d'Or. *Bourbon:* Gloire de Rosamene, Baronne de Noirmont. *Perpetual:* Abbé Bramerel, Alfred Colomb, Auguste Neomann, Baron de Bonstettin, Baronne Louise Uxkull, Boule de Neige, Capitaine Lamure, Charles Lefebvre, Charles Turner, Climbing Victor Verdier, Edward Morren, General Miloradovitsch, Glory of Waltham, Jules Margottin, Louis Van Houtte, Madame Canrobert, Madame Laurent, Paul Neron, Perle des Blanches, President Willermoz, Princess Beatrice, Reine des Blanches, Susanna Wood, Thomas Methven, and Stanwell Perpetual (Scotch).

Bedding Plants in Stony Soil (*F. H.*).—By all means remove the stones, which if left in the soil will cause endless trouble; if so stony as to need riddling you will do well to add some good loam, or manure liberally, as in such a soil, upon gravel, the plants will hardly grow too vigorously. The process you propose following will answer for the flower beds and lawn, but we should have the depth of soil for the grass over rather than under one foot.

Melons and Cucumbers in Frames (*Amateur*).—They require air according to the weather. You will do best with a thermometer in each frame, by which you can be guided as to when to give air and when to shut-up the frames. The temperature when air is given should be 75°, and then you should only give an inch or so, or, if cold and frosty, less; and it should not be given to lower the temperature, but to prevent it from rising too high. If it lower the temperature the ventilation is too great, and if the temperature rise it is proper, and will need to be increased with the temperature, increasing the opening at 80°, and there is no need to admit more air so long as the temperature does not exceed 90°. The ventilation will need to be reduced when the temperature is falling. At 80° reduce the opening, closing the frame at that temperature, and if it rise to 85° after the removal of ventilation there is no harm, but if it rise so as to exceed that temperature the ventilation has been too early withdrawn. A little practice will soon enable you to give air without lowering the temperature, and reduce it without its rising too high for the well-doing of the plants. Mats should be placed on the lights to prevent the temperature falling too low during the night. They should be put on at about 5 P.M., and removed at between seven and eight o'clock in the morning. Blue Gown is a good Cucumber for a frame, and Little Heath Melon will answer well.

Pitcher (*Rufus*).—A letter received to-day enables us to answer your query. "A pitcher" in the West of England is the name by which is distinguished the branch of an Apple tree which has an excrescence or wen that will emit roots if the branch is cut from the tree just below the excrescence and planted. The Burr-knot, the English Codlin, and some other Apple trees commonly afford "pitchers."

Pines not Swowing (*A. B.*).—The plants not having started for fruit as you anticipated, we should keep rather dry for about six weeks, after which they will probably upon the application of moisture start into fruit. They require a moist atmosphere, and especially when they are growing and swelling the fruit, and water twice or thrice a-week, according to the weather. A peck of sheep droppings to thirty gallons of water, one peck of horse droppings to twenty gallons, or 1 oz. of guano to a gallon of water, are good liquid manures for Pines and all fruits.

Heating Range of Houses (*R. M.*).—You will require two 4-inch pipes for bottom heat to the propagating pit, and the same for top heat; the early vinery four rows along the front; the greenhouse two rows along both sides and ends except the front doorway, and the late vinery two along the front, all 4-inch-diameter pipes. As to the direction of the pipes we should take a main direct from the boiler at the back of the early vinery or in the pathway, and through to the far side of the greenhouse, having the main flow and return in a fine, and a cover of iron grating, forming part or whole of the pathway. From this main branch immediately on entering the early vinery across the end and 3 feet from the front branch to the left for the early vinery, continuing the piping to its end, and then return beneath them, or the pipes may be on the level, having a triple branch pipe next the propagating pit pipe or pipe going thereto, and a four-branch syphon at the other, one of which will be a return pipe. Continue the pipe at the end of the early vinery forward to the propagating pit, twice its length for top heat, which may be in the pathway, and twice the length of the pit for bottom heat to the propagating bed. The main flow continue through the early vinery to the greenhouse and across its back, branching immediately on entering it, taking it along its side to the doorway, and then return. At the other side of greenhouse the piping to be continued to the doorway, and then return, from the flow of this side the greenhouse branch through the wall into the late vinery, and about 3 feet from the front wall taking its entire length, returning by a syphon, and brought back to join the greenhouse return pipe. You will need valves upon all flows—*i.e.*, those of each house, immediately they leave the main in each case and two upon the greenhouse pipes, so that you may have as little waste heat as possible. The main flow and return we should have about a foot to 15 inches lower than the pipes in each house, and in all the houses have them upon the same level. You will require air pipes at the highest point of the pipes in each house, which should be immediately before the water return, and both in the vineries and propagating pit half the piping should be provided with evaporating troughs. Altogether you will have about 560 feet of 4-inch piping, and to heat this you will require a boiler presenting 10 superficial feet of surface to the direct action of the fire, or a saddle boiler about 3 feet 6 inches long.

Liming Ground for Potatoes (*Amateur*).—A dressing of lime would be highly beneficial, and that known as "land" lime is most suitable. It should be used in a quick state, and at the rate of two bushels per 100 square yards. The lime should be applied before planting—*i.e.*, spread on the surface and lightly forked-in.

Names of Plants (*Country Parson*).—The specimen was too shrivelled to enable us to identify it with certainty. It appears to be an Orobus, probably O. vernus, though it is strong for that variety. Propagation is effected by division at this season, taking off an eye or two coming from the crown, and with a portion of root attached, inserting it in sandy soil. (*A. C.*).—We cannot name plants from leaves only, nor from mere flower buds.

POULTRY, BEE, AND PIGEON CHRONICLE.

CLASSES.

We think many schedules of poultry shows need revising. We see frequently year after year the schedule of a show, especially those connected with agricultural exhibitions, copied as to its classes verbatim. No allowance is made for their being well or badly filled. "It did last year, and we suppose it will this," seems to be the idea of the committees of many such shows. Bullocks and sheep are the glory of those schedule-framers, and cocks and hens mere rubbish in their eyes. We can only say to them that the poultry tent of such meetings is not only always the most crowded, but that that is the department which brings the money in entry fees and the visitors' money at the gates. Knock off the poultry, and see whether the receipts are the same. In these days poultry shows are as thick as thieves, and exhibitors will patronise those which serve them best, and so the committees of agricultural societies must really look to their poultry schedules before it is too late. We will not here be invidious and name any particular show, but we could tell of many that go on year after year issuing their schedule a facsimile of the last one, and year after year the entries decrease, till a more than ordinarily vigorous push will have to be given to bring the poultry department once more in a flourishing way. Of course we do not expect such exhibitions to have classes for the rarer breeds, but they should most certainly give classes for Dark and Light Brahmas, for two varieties at least of Game and Cochins, and one for Houdans—the pre-eminently useful table bird, and so on. As it is, we find the money often, especially at southern and midland shows, allotted in such a way as to show clearly that the committee can have no idea of even the existence of many breeds.

We are often asked whether we prefer the single-bird system, pairs of hens and single cocks, or pairs of cock and hen; we can only reply that each division has its *pros* and *cons*. This must be evident to all, so we need not go into them. Perhaps for some reasons the single-bird system is the most highly favoured, as birds can be so sent from any run without fear of being soiled or persecuted by its companion; but the two great drawbacks to this plan strike us as being—first, that a single bird at an exhibition has much less chance of being claimed than if it was with a companion, for ordinarily £10 would not be given for a single bird when £20 would be for a good matching pair, and we must remember these long prices do, to a great extent, keep up the fancy; and secondly and chiefly, we find a society only intends to expend a certain sum of money, and by having classes for single birds instead of for cock and hen, the money is all spent over certain classes, perhaps those in which the committee take most interest, and consequently the remaining breeds go to the wall, and have to meet on that unhappy ground—the refuge for the destitute. We do not for a minute mean to say the same money should be expended on Silkies as on Dorkings or Houdans, but we do think schedules should try to support more than they do the weaker varieties. We must again quote Oxford. We call it a perfect schedule in having classes for nearly every recognised breed, with really handsome prizes and a low entrance fee. We even think in its distribution of its money it is the fairest schedule that exists.

It is important for the larger breeds to be shown when they come to a certain age separately—that is, cocks separate from hens; but for the smaller breeds and Bantams it is not nearly so necessary. We would, then, recommend a schedule being divided into two parts. In the one we would place Dorkings,

Brahmas, Cochins, Malays, and Game for their fighting propensities, and perhaps the French breeds; in the other we would have Hamburghs, Polands, Spanish, Leghorns, Silkies, Andalusians, and such like, and all breeds of Bantams. The first part we would have for single birds, or cocks and pairs of hens; in the second cocks and hens together. We fancy we should thus have more entries, please all exhibitors, and divide the prize money more fairly. Of course at such leviathan meetings as the Palace, and anywhere else where there is plenty of space and money to lay out in prizes, the classes can be divided off even yet more for single birds. For all ordinary exhibitions, however, such a classification as we name would, we think, meet all ends. For instance, Northampton has a superior schedule, one which does Mr. Humphreys and his colleagues much credit; but if some such division as we name had been in existence there the extra money gained by putting the Hamburgh, Bantam, and such like cocks and hens together, would have enabled them to give more classes for Dorkings, and a class for Polands, Black Cochins, &c., which would have made their exhibition more complete, and not have decreased, we feel sure, the amount of entry money.

For the early chicken shows cockerels and pullets have generally to be shown together, for there are very few societies which hold their meetings in July, August, and September that can afford so many classes as the single-bird system entails, and so they must have pairs; but even these can apportion their money more fairly among the different breeds by better classification than they are in the habit of doing. Perhaps, however, it does not matter so much with those birds to be shown singly, for they have generally lived on stimulating foods to push them on for early showing, and the continual moving about from show to show checks their growth and entirely unfits them for any chance of being able to take part in the later and more important exhibitions. These birds thus shown about are very rarely of any good afterwards, and by the end of September have had their day. We are, of course, here speaking of those birds which go to show after show during the hot summer months. We feel certain nothing is so bad for a bird as to be exhibited before it is naturally matured and filled-out. We can quote many cases when being exhibited only once while in a growing state has checked the growth of the birds from that date.

While on the subject we must say a word on classes for pairs of hens or pullets. We know they are not fashionable, but we have a great affection for them. We have the most pleasing recollections of buying our first hens in pairs at a show, and now we find but rarely opportunities of doing this. We think these classes should still go on. Undoubtedly a pair of hens in a pen are much more attractive than is a single one; but apart from this we are unable to buy a pair of birds that match and suit our requirements, for it always somehow seems unsatisfactory to buy one bird, and very likely give as much for it, if we feel we must have it, as we used to give for a pair. The single-bird system has in many cases checked the number of pens sold at an exhibition, and we do not wonder at it. By all means we say separate the cocks from the hens in the large breeds, but do let us have sometimes an opportunity of seeing as well as buying a really well-matched pair of hens or pullets.

One more word in conclusion as to classes for the "abused" breeds. We feel Leghorns, Minorcas, Sultans, Silkies, Black Cochins, and even Malays and Polands should have more attention paid to them. We must remember, though the leviathan exhibitors do not generally go in for such "small deer," still their admirers are people who work hard for the fancy, and help in no small degree to make up its very backbone—people, too, who spend their money nobly on their pets, for we know of a gentleman who gave £10 10*s.* for the first Palace Silky cockerel, and £10 10*s.* would buy a good Cochin or Brahma, and is an unprecedented price for a Silky. Surely, then, such fanciers should be supported, and we confidently hope we shall gradually see more classes, till at length a "refuge" will be hardly needed.—W.

HOUDANS LAYING.

Last June I purchased several Houdan chickens. They were easily reared, and in every respect I was much pleased with this breed. Five of the pullets were put on a run with a cock of 1873, the cock being no relation whatever to the pullets. I was much surprised and disappointed by the lateness with which the fowls in question commenced laying, not one egg having been laid by them three weeks ago, although now they are in full lay, and lay so remarkably well that they are helping to make up for past deficiencies in that respect. I think the Houdan a very useful fowl, but I should like to see it a much earlier layer than it is with me. The experiences of the correspondents of the *Journal of Horticulture* have been very interesting to me, and also, I doubt not, to many others who have read them.—Walter B. Arundel.

My friend, "D., *Deal*," asks for our experience with Houdans as layers. I have now had them for five years, and I grow more fond of them every day. My birds lay well. My two pens of prize birds, consisting of five hens or pullets in each pen, are now averaging nine eggs a-day. They are confined in runs 35 feet by 12; and they have been laying since the first week in February. Of course the average during that month was not so great, but still good. I have some birds running quite free, and they have been laying well since the end of December. Does not "D., *Deal*," overfeed? I feed but twice a-day.—E. Handley, *Glastonbury*.

DREAMS OF A POULTRY FANCIER.

Reader, do you ever suffer from the visits of nocturnal hens? Do they ever pay you a flying visit? Did you ever, for instance, in your dreams go to remove that last promising hatch from the sitting house, and, putting your hand into the nest for the chickens, feel twining round your fingers thirteen cold but lively young snakes? Or did you ever observe that large grey tom cat sitting in the coop with your chickens, and playfully scratching the back of your best cockerel with blood-stained claws? Perhaps your disordered imagination never prompted you to try and lift up one of your coops to put it under shelter during heavy rain; but if it did, no doubt you found it stuck so tightly to the ground that your most frantic efforts failed to move it. How the rain beat down on your perspiring head! and how you struggled and pulled until, with eyes starting out of your head, you suddenly felt the top of the coop give way, and found yourself rolling in the mud, horror-stricken at the thought that all your chickens were either crushed in the ruins or drowned by the deluge! What a horrid cackling the old hen makes as you start up to find that the alarum is going off, and that it is time for you to turn out to feed your early chickens.

Reader, if you are a fancier, and yet your breathing has never been oppressed o' nights by heavy hens; if your disordered digestive organs have never given birth to feathered monsters; if your excited brain has never been over-run with broods of starving chickens—be thankful. Perhaps they have dealt with you more kindly, for these birds of night, I feel bound to say, can make themselves agreeable when they like. It has been my lot on more than one occasion to have first prizes and silver cups awarded to me by proclamation during the witching hours of night.

It was not long ago that I appeared to be called upon suddenly to pack up one of my champions, and in company with another fancier, who also had his hamper, to proceed to a distant poultry show. Our conveyance was an outside Irish car, and great was our solicitude for the two hampers which contained our precious specimens; and as we had not seen each other's birds, many were the speculations as to which of us would carry off the champion cup. I confess that I felt an overweening confidence in my own production, and still remember the feelings of triumph and conscious superiority with which on arrival at the show I cut the string and threw back the lid of my hamper. As I lifted out my treasure, which in appearance resembled a very pretty six-year-old child dressed in a white frock and blue sash, did I manifest any surprise? Not in the least. Such paltry considerations as the differences between birds and little girls in blue sashes are quite beneath one on these occasions. And as my friend produced another little girl with a red sash, but of a lankier and leaner description, my exultation knew no bounds. I felt sure of the cup, and was quite sorry for my friend, who, with crest-fallen look, leaned on his hamper as our two competitors proceeded to pen themselves in their respective cages. I am much ashamed of myself 'tis true, when I find that in divesting myself of my dress I am unable at the same time to lay aside the thoughts and cares that enwrap my brain by day for the more suitable nightdress of oblivion. But so it is. Tell me what you do by day, and I'll tell you what you dream of at night. So now that I have disclosed my night vision you can well guess what gives rise to them. And is there not a cause?

Did you ever, my friend, look with pride and pleasure on the tenants of your poultry-yard? Did you ever, after careful study of their various points, divide them with a view to future increase, and wait with patience for the fruit of the union? and after a cold and dreary December congratulate yourself on a mild January, which enlarged the combs of your hens and painted them of a deeper red? Did you watch eagerly for the first egg, and finding it, bear it off in triumph? Did you collect these priceless embryos slowly day by day from your choicest birds, and as the number multiplied think that, this year at all events, you would whip creation? Did you scour the country for broody hens, and after much trouble and expense secure two? Did you carefully make-up their nests in warm corners, and commit to them these precious eggs, which you remark are worth a guinea a-piece? Did you retire that night to your virtuous couch and reflect that at all events you had done your share towards your future anticipated success? Did you for twenty days carefully watch over and tend those hens and eggs, and for twenty nights have sweet visions of silver cups and £20 notes? Did you on the twenty-first day go to your nests

with a beating heart to find out how the hatching was proceeding? Did you feel a sudden revulsion when you found only one egg chipped? Did you say to yourself, "It's the cold weather, they will be sure to hatch a day late?" Did you leave them until the evening? and did further examination then disclose to you the painful fact that your two sittings would in all probability present you with the magnificent result of one chick? Did you go next morning and find that one chicken strong and lively, disporting itself on a pavement of addled eggs? Did you meditate on its destruction, but conclude at last that you would not wring its neck, as it might be a good one? Did you feed that small and solitary chicken patiently all that day, and in the evening eat a heavy supper previous to giving him his night meal? Did you set your alarum with a gloomy countenance, and reflect that you would have to turn out early next morning and every morning for some time to come to feed your charge by lamplight? Did you bless the day on which that chicken was hatched, and lie down to rest? To rest! did I say?

My friend, watchful eyes have been upon you. This is an opportunity not to be missed. This night shall high jinks be performed on your prostrate body by ghostly cocks and hens. This night shall that chicken which is "one" by day multiply itself ten thousandfold and sit in every corner of your distracted brain. And as you wake up from your troubled slumbers, scared and thirsty at the sound of the alarum, the bitterness of your lot will be still further increased as you remember that you have not been able to sit any other eggs, and that consequently it will be at least a month during which you will have to dance attendance upon your solitary chicken.

Moral.—Don't write and abuse the person from whom you purchased your sitting of eggs in January or February because you have only three chickens from them. Be assured that the vendor would esteem himself fortunate if he could make sure of securing as many from each of his early broods.—R. W. Beachey.

A COLUMBARIAN SOCIETY FOR LEEDS.

Owing to the increasing interest in the cultivation of high-class Pigeons in and around the town of Leeds, it has long been felt by the leading fanciers of that locality that a society of the above description would be of great service. In furtherance of this opinion, on Tuesday the 6th inst., mainly, we are in justice bound to state, by the exertions of Mr. E. Mawson of Moor Allerton, a meeting was convened at Parker's Temperance Hotel, when Lieut.-Col. Child occupied the chair. The following officers were elected—viz., Lieut.-Col. Child, Leeds and Arthington, President; Capt. Dawson, Weston Hall, Otley, and Mr. S. E. Seanor, 26, Springfield Place, Leeds, Vice-Presidents; Mr. E. Mawson, Moor Allerton, Leeds, Hon. Secretary and Treasurer. After a brief discussion it was decided the title be "The Leeds Columbarian Society." The Society starts with a list of about thirty members.

The Number of Eggs in a Hen.—A German naturalist a short time since instituted some careful investigations, the result of which showed the ovary of a hen contains about six hundred embryo eggs. He also found that some twenty of these are matured the first year, about 120 during the second year, 135 during the third, 114 during the fourth, and during the fifth, sixth, seventh, and eighth years the number decreases by twenty annually. Consequently that after the fourth, or at most the fifth year, hens are no longer profitable as layers, unless it may be in exceptional instances.

FOREIGN TRUMPETERS.

In "Wiltshire Rector's" last article on Owls, &c., he states that "unfortunately foreign Trumpeters do not breed in England." This I was quite surprised to hear, as a fine pair which I received in the autumn of 1873 bred last year seven young birds, five of which they reared themselves, and six of them are still alive in my possession. This season they have made a beginning, as they are sitting on a pair of full eggs. This, I think, is quite equal to the breeding powers of the old style of birds which I kept for many years. I do not think it can be the climate. The winters in their native country are, no doubt, colder than here, but their summers are quite as warm as ours, I believe even more so; but I do not think there is sufficient difference to affect their breeding powers, neither should the very slight difference between the climates of England and Scotland affect them. Mine are among my Pouters and have no special attention, but potter about in their peculiar groping sort of way just as they please. They look stupid birds, but are not so in reality.—Geo. Ure.

In reply to Mr. Hutchinson, what I said about foreign Trumpeters not breeding in England I had from a very distinguished exhibitor of that class of Pigeons. He stated that he could never induce two true foreign birds to breed, but that one English-bred and one foreign would do so. I do not like without his permission to mention his name, but if Mr. Hutchinson will send me his address through our Editors I will do so privately to him, as no doubt he would be glad to hear of Mr. Hutchinson's plan. I rather suspect that the birds that bred were only partly foreign.

The Russian Trumpeter is a grand bird. The first I saw were a pair at a fancier's since dead, at a town on the east coast of Scotland, and he had brought them from Archangel, a port on the White Sea, the very northern part of Russia. They were called by their owner Russian Pigeons, but unless my memory deceives me they were simply and truly very fine Trumpeters.

I am glad Mr. Hutchinson agrees with me about the Dragoon. There can be no difference of opinion about that bird by fanciers who have studied the old authorities.—Wiltshire Rector.

FEATHERS OF THE SILVER-LACED BANTAM.

The hackle feathers (fig. 69), from the smallest to the largest, have the same mark, with a light border. Those of the neck

Fig. 69.

Fig. 70.

and breast (fig. 70) are very regular in their marking; as are those of the back, shoulders, and the tail coverts (fig. 71). Those

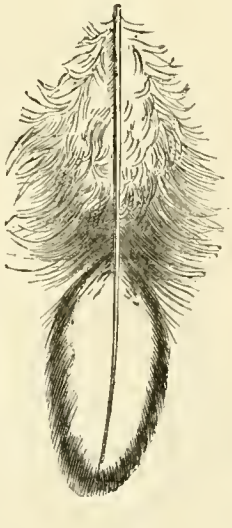


Fig. 71.

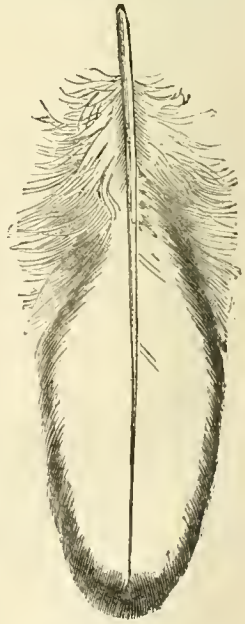


Fig. 72.

of the wing coverts have the stripes narrower (fig. 72); also the

large feathers of the wings and the tail (fig. 73). Those of the thighs (fig. 74) have the stripes broader, and they are altogether

Fig. 73.

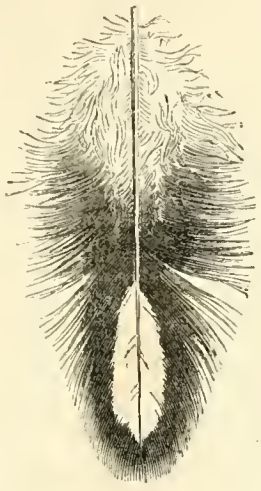


Fig. 74.

darker. The feathers of the abdomen and sides are of a mixed grey.

THE ENGLISH OWL AND MAHOMET PIGEONS.

"Wiltshire Rector" gives his opponents a sugared plum to encourage them to go on. Having received one of his plums I therefore proceed to mention some ideas suggested by the Rector's last.

Eaton in his book quotes the writer of the Treatise of 1765 as Mayor. For shortness I shall do the same. I do not consider Mayor is wrong in his quotation about the size of the Owl, for although it is, as Mr. Tegetmeier says in his book, the size of the Turbit that Moore gives as little larger than the Jacobin, he immediately afterwards in the few words devoted to the Owl says, "This Pigeon is in make and shape like the former (the Turbit). Things equal to the same thing are equal to each other."

The Rector is too hard on Mayor when he says, "The former quotes Moore throughout without acknowledgment, which is the conduct of a dishonest man." Eaton also attacks him, saying, "I am rather surprised Mayor had not a little more candour or honour in acknowledging Moore, from whose works he cabbaged the greater part of his work; he simply mentions his name twice throughout his work"—viz., at pages 125 and 141. We shall see further on that Eaton himself was an accomplished cabbager Instead of mentioning Moore's name only twice, I find on a casual look through the book that Mayor mentions it eight times; and further, from what is original in his book, I judge him to have been a Pigeon fancier of the right stamp, whatever Girton *alias* Thompson may have been. Perhaps Eaton's copy of Mayor was mutilated and imperfect, or perhaps it may have been the small paper edition with simple woodcuts, and not the large paper one with good steel plates, which the Rector tells me privately I am the fortunate possessor of. Not yet having a copy of the small paper edition I cannot say whether or not in it Moore is only named twice. Certainly Eaton was a painstaking careful writer, and to be trusted to transcribe what he read. This is what Mayor says in his preface page xiii., "In regard to the model of this Treatise we do not offer it to the public as an entire new work, but have proceeded on the plan of Mr. Moore, have corrected some errors and made many additions with extracts from other authors; and as Mr. Moore's essay is very deficient for want of cuts to convey a just idea of the different species, in order to supply that defect we have procured engravings from the best hands at a very great expense in order to illustrate this work, all which are done from the life, and very masterly executed under the inspection of the author and other fanciers." He here lays claim to being more than a "bookseller's hack," and writes much on the Almond and other Tumblers, Owls, Mahomets, Lace Pigeons, and Frillbacks, that is all original.

Although Mayor mentions Moore much oftener than Eaton gives him credit for, Eaton himself published his Almond Tumbler in 1851, three-fourths of which is copied verbatim from Windus, and he never mentions his name once, or, supposing he did not know his name at that time, the existence of the book published in 1802 by "An Old Fancier." In his subsequent publications of 1852 and 1858 Eaton takes Moore as his text, adding notes of his own and writers between Moore and that time. But in each of these books he reprints his Almond Tumbler with very slight alterations, not taking Windus as a text, and adding notes of his own to show what he was entitled to, but in such a way as to make the reader believe that all was his own. Those having the Almond Tumbler of 1802 and 1851 can of course see what belongs to each writer.

As to the Owl of Moore's time all he says about it is, that "in make and shape it is like the Turbit, except that the upper chap of its beak is hooked over like an Owl's, and whence it has its name. Its colour is always entirely white, blue, or black." Mayor gives a much fuller description, includes yellow among the colours, and mentions "a fine sky blue, and the lighter they are in colour, particularly in the hackle, the more they are valued." This to my mind is the colour known as powdered blue, and I am therefore satisfied that this colour has been known in Owls for 110 years. I have a theory how it was produced, and will mention it further on. I do not think that Moore ever saw such birds as the fine African Owls now imported, or he would have given a very different description of them; also, had there been Powdered Blues then he would have mentioned them. By Mayor's time, however, I think some of the Africans had been imported and put the old style in the shade, so particularly does he describe birds that answer their description. But unfortunately his plate of the bird does not answer his really good description. If birds of the right stamp had been imported it must have been in insufficient numbers to perpetuate the fine style, or they must have been lost ere long by carelessness.

The colour powder blue, when I wrote some weeks ago, was in my opinion confined to the Owl Pigeon. I strangely forgot the appearance of a bird I saw last year in Mr. Wallace's place in Glasgow. This was one of a pair that had been brought, I think Mr. Wallace's son told me, from Constantinople, and which as far as I can remember it, corresponds exactly with the Pigeons called Damascenes, figured in No. 11 of Mr. Fulton's new book. These birds appear to me to be what Mayor describes as the true Mahomets, as opposed to Moore's statement that the Mahomet is a White Barb. Brent also says he once saw a pair of them at a London dealer's (Eaton, page 102). Mayor calls them "nearly cream-coloured with bars across the wing as black as ebony, of the size of a Turbit, with a fine gullet, and in lieu of a frill the feathers rather appear like a seam with a small naked circle of black flesh round the eye and a small black wattle." There seems no doubt that the African Owl is in colour only white, black, sooty, blue or white, splashed with black and blue. They seem to have been all interbred, colour being disregarded. From a blue-tailed white hen and a black-tailed white cock I bred pure white, all dark blue and whites splashed with blue and black. Anything approaching a sky or powdered blue I never saw in African Owls that were really fine ones. I think, therefore, that the Powdered Blues were produced by crossing with the Mahomet, as described by Mayor, which is not a proper cream-colour but so light a blue that the dark neck accompanying blue Pigeons is entirely absent, and a creamy appearance takes its place, the bars remaining black as ebony. From old association however, I like the powder blue in Owls, and repeat that could it be engrafted on birds so fine as the Africans it would suit them well. I fear, however, it never will, for the dusky colour of the African destroys it at once; and a breeder would be so far away in head, beak, and size as to lose heart. But though not probable it is possible, and patience may accomplish the work.

The Rector's theory of the climate is not to my way of thinking. Cold countries do not increase, they rather diminish size. The heaviest birds among Pigeons are the Mediterranean Runts. The Russian Trumpeter looks a large bird but does not handle so, being all feathers. I can remember and have had Trumpeters of the old type half as heavy again as the largest Russians; I know of one pair of Russians that bred six or seven young birds last year and all fine.

The African Owls, the Turbiteens, Blondinettes, and Russian

Trumpeters are all illustrations of the power of mind over matter. They are the masterpieces of grand fanciers, and put us to shame. In charity let us suppose we never had good of the kind to begin with, but to crack up our own miserable half-bred or deteriorated things is what I cannot do. If flyers are wanted better can be had than coarse Owls, one of the funniest of Pigeons.

We have at least three breeds of our own—the Pouter, Carrier, and Short-faced Tumbler. These grand Pigeons seem to have no attraction for many who spend their money (which is nothing, as it only goes from flat to sharp), and precious time (which is something, for it might be devoted to better work), on Dragoons—save the mark—about which no two can agree as to what they are, Short-faced, Antwerps, and the like.—JAMES C. LYELL.

[We have omitted the vituperation you wrote relative to the plagiarism on Fantails by "E. C. D.," in a contemporary; we have omitted it because we informed the editor that another correspondent had noticed the plagiary, and the editor in his last number has made a due acknowledgment.—EDS.]

TOY PIGEONS.

AFTER the common Pigeons the Toys, or birds noted for combinations of colours, were the earliest succeeding links in the chain of varieties of Pigeons. In the development of art colour was the first thing of interest to the ancient savages, just as now it first attracts the child; this comparison is a just one, for the æsthetics of the aborigines were no more developed than are those of a child of the nineteenth century. An ordinary amount of intelligence is pleased with colouring; it requires education to notice and appreciate special points, such as heads, beaks, crops, &c. Therefore, in the earlier days of mankind and Pigeon fancying, colouring was the attraction; certain Pigeons were kept because of their being sports of different markings from their ancestors; thrown together they produced other sports, and so varieties of Toys were produced.

Almost every boy whose opportunities are few to obtain varieties, grows (in a small way) through precisely the experience of the whole human family, in its efforts to develope the varieties. As the life of an individual is really the life of a nation, so is the life of a fancier really an epitome of the world's Pigeon fancying. As in childhood he is pleased with a common, then a Baldhead common, until he can procure Toys, fancies, and at last high fancies; so the human family first kept their commons, then selected the sports, and finding from experience that two birds looking alike might produce their like, took pains to match such together, and so developed colours or Toys, until some trait, as tumbling, accidental at first, or ponting, or increased wattle, turned their attention to and produced more intricate differences. Each fancier grows through these eras, unless he starts late in life and founds himself on the books.

Toys are, therefore, the first removes from the commons, and those parts of the Pigeons that are easiest to change were undoubtedly the first distinguishing marks; white tails and flights, then white heads, wings, breasts, &c., at last the perfect white bird. After such markings were admired for countless years, varieties became fixed, certain combinations of colours were looked upon as standards, and names were given to such.

The names prove more conclusively than any other source of information at what era certain varieties were acknowledged to be sufficiently fixed to be entitled to that distinction. The name Nun, as applied to Pigeons, shows that the variety was named because of a fancied resemblance to the head-dress of a religious devotee of the Catholic Church; therefore, we can set the variety down as having been developed since the establishment of catholicism. So of the Helmet, from Anglo-Saxon derivation, not only proving the variety to have come into existence since the use of helmets in war, but also pointing out its birthplace.

Most of the Toys can be traced in this manner to an era and a birthplace, and many changes have been noted in the class and in the different varieties of the class. Not only has the class been increased by additional numbers, but the varieties have been subdivided into blacks, reds, yellows, blues, &c., until combinations of any kind can be obtained; or when not immediately obtainable, can be bred. The birds that rank as standard varieties are Suabians, Archangels, Hyacinths, Porcelains, Starlings, Nuns, Priests, Spots, Swallows, Magpies, Helmets, and Ice Pigeons. From this list a fancier can choose those he wishes to breed. As standards, or to cross for new specimens, none of them breed perfectly true. No matter which you take, there will always be some of the young that turn out foul; and nothing is a surer proof of their common ancestry than that the foul young are of no more worth in appearance or value than so many commons.

After Tumblers became known that trait was engrafted upon the more ancient Toys, and not many years ago there were Magpied, Helmeted, and Nun Tumblers; and these varieties can again be reproduced by matching proper specimens of the Tumblers and Toys together, selecting the well-marked tumbling young as nuclei for the strain. Any enterprising fancier can multiply the strains of Toys *ad infinitum*; but it is not every Toy fancier that can handle successfully the fancies or high fancies, each of which definition supposes a higher degree of excellence in the Pigeons designated, and a greater knowledge on the part of the fancier admiring.

The Toy fancy is but the entered apprentice degree; the fancy that of fellowcraft; and the high fancy ranks as the master degree.

One may understand both the first and never rise to the dignity of the last; but one cannot know thoroughly the last without holding the first as a mere stepping-stone on the road to knowledge.

There may be a few readers to whom it should be told the Toys refer to Pigeons whose sole value consists in one point—colour, properly distributed upon a designated ground colour, which is generally white. The fancies refer to a large class having more than one point, such as Owls, Turbits, Fantails, &c.; and high fancy but three varieties, whose intricate points are numerous and difficult to obtain—viz., Almonds, Carriers, and Pouters. One or two varieties, such as Barbs, might be entitled to a place in the latter class, but are not as yet so recognised.—DR. WILBUR P. MORGAN, *Baltimore, Md.*—(*American Fanciers' Journal.*)

[If Dr. Morgan does not always throw new light upon a subject, he at any rate always throws additional interest around it; sometimes indeed he does both. Toys appear to be more generally fancied in America than in England. In this we see the leading characteristic of each country—England holds to the old, America attaches itself to what is new. With us a boy fancier obtains common Tumblers or interior Pouters, but his desire is, or will be, to have good Tumblers and good Pouters, Toys are unthought of. I think that with us it is rather wealthy and adult fanciers take to Toys.

Dr. Morgan is no doubt right that Toys are the first removes from the common: thus the dovehouse beak and form is retained by one of the oldest Toy Pigeons—viz., the Nun; and it would be a pretty theory that the boy fancier is the Toy fancier, but untrue now with us, for the old gentlemen—the bald, the grey, the portly, or the shrivelled, are mostly given to Toys. The solemn and somewhat pompous announcement in old Moore at the end of his article on the Runt, "The following sorts of Pigeons are generally deemed and called Toys by the gentlemen of the fancy," rather points to the conclusion that in his day the upper-class fanciers only cared for Carriers and their kindred the Horseman and the Dragoon; the Pouter and his kindred, the Parisian and the Uploper; the Tumbler in his many varieties, and the three varieties of the Runt. And I suppose that the grandees of the fancy sniffed at the poor Toys and their owners. This was very absurd, for certainly the Barb and the Jacobin and the Fantail are as beautiful and as distinct, and as far removed from the common type as the Carrier, Pouter, or Almond. Brent, with his good common sense, includes the Fantail, the Jacobin, the Trumpeter, the Turbit, Owl, Barb, and Frillback, among high fancy Pigeons, and makes the Toy list to include only Pigeons having the common shape with variations of plumage, and this I fully agree to. Dr. Morgan ingeniously connects the names of some of the Toys with the time of their first cultivation.

I would certainly give the older Toys the highest place, for two reasons. First because they are oldest, and secondly because they breed the more true; for oh! the foul feathers that come in the best Toys! what gardening they have before they are exhibited, and how unlike often their young are to themselves! As Brent and Dr. Morgan divide Pigeons there is no cause to complain. The high fancy birds give the most trouble, but success in them wins the highest rewards of pleasure perhaps, and certainly of money.

The fancy give much pleasure with much less trouble, and suit those who cannot be much at home with their pets, or who have no trustworthy substitute to see to feeders, &c. And the Toys according to Dr. Morgan's arrangement just suit some ladies who have an eye for feather, or those who love the new or think they can win a prize in the Any variety class. Also there are certain minds which are greatly attracted by Toys, and it is well, for in England they would cease to be cultivated but for a few ardent feather-loving fanciers.—WILTSHIRE RECTOR.]

LIGURIAN VERSUS COMMON BEES.

As one whose hobby is bees I hope you will allow me to protest against Mr. Hunter's suggestion to set aside the proposed trial side by side of Ligurian and Black bees. I am one of the doubters as to the superiority of the Ligurians as honey-collectors, and do not see the logic of Mr. Hunter's argument, that because Ligurians are more prolific breeders they are therefore better honey-collectors by virtue of their being more numerous. Is it not possible that one kind of bees go in more for swarming, another more for honey-collecting? The former is the

opinion which I have formed of Ligurians, the latter of our old friends, and this chiefly from what I have read of them for some years in "our Journal."

I should like to be informed, for I do not know, what kind of bees inhabited the twelve hives which produced the 907 lbs. of virgin honey exhibited at the Crystal Palace Show.

I only desire the trial in the interest of science, and of the increasing number of bee-keepers. Till the matter is thus satisfactorily proved I shall look upon Ligurians as a fancy of the day, a mere fashion, and remain—UNCONVINCED.

RUFFED AND PINNATED GROUSE.

As your correspondent "A. H. B." alludes to these two species of American Grouse as if they were identical, he cannot have read Wilson with much care. The above-mentioned birds are entirely distinct, and do not frequent the same districts or the same nature of ground. The Ruffed Grouse (Tetrao umbellus) is a woodland bird, having the habits of our Pheasant. The Pinnated Grouse (T. cupido) frequents the boundless grassy plains of America, and is commonly called the Prairie Hen. It much resembles our Black Game in its food and choice of ground.

I am much surprised that anyone having access to the public papers should not have observed the numerous trials of late to introduce this delicious and hardy Game bird. One Sergeant Bates of Illinois—who distinguished himself some time since by walking through England bearing the American flag—wrote in the *Field* and other papers about a year ago that he could send any quantity over, if he had an order, at about 10*s.* a couple. He also wrote me a long letter on the subject, which I took up warmly, and sent him a long list of noblemen and gentlemen anxious to try them on an extensive scale. I also suggested sending over sound eggs, and he sent me nearly a hundred, evidently gathered fresh and well packed. These all failed for many reasons: They were above a month on their journey; they were several days in the custom house at Liverpool when the weather was tropical—sufficient to addle anything of the sort. I kept them under hens for a month, and on examination found the yolk had adhered to the sides for want of turning, which is indispensable.

I am positive that eggs might be brought over with their vitality retained if skilfully managed, as we have well authenticated instances of their being kept for months and then hatching (*vide* Jesse's "Gleanings," &c.). Some eggs sent at the same time to the Prince of Wales brought out, but the chicks did not survive, being weakly. I do not see why Mr. Baily in particular should be applied to when Mr. Jamrach advertises them for sale. He had a fine lot last year, which were picked up immediately. Those which my personal friends had from him all died; they would not endure the confinement of an aviary when spring with its natural attendant impulses arrived, but became uneasy and pined away. Mr. Jamrach also advertised several pairs in the early part of this year, and may have some yet. I dared not venture to take any at the time, as we have had the severest winter on record, and there was no shelter or food to keep them within bounds.

Prairie fowl are great ramblers in quest of food and frequent open ground; Ruffed Grouse, on the other hand, fly into the nearest wood or thicket on being disturbed. This habit makes them the more desirable bird for us to introduce.

They are now extinct in many States of America, where they abounded in the days of Wilson and Audubon. The latter had a great quantity of both perfectly domesticated at his home in Kentucky. The only chance of success with Prairie Fowl would be to introduce them on a large scale, so as to leave a good margin for accidents and on a large domain of land.

The best account of recent date of these birds is to be read in "Gun, Rod, and Saddle," by Parker Gillmore, who knows my part of the country well, and insists that both Prairie Fowl and Ruffed Grouse would do well in many parts of the north of England and Scotland.—J. GILLBANKS, *Cumberland.*

THE PRIZE CAGES AT THE CRYSTAL PALACE BIRD SHOW.

SECOND-PRIZE CAGE.

THIS cage (fig. 75) met with the approbation of the Judges, owing to the suitability of it to show a bird effectively. It is simple and light, with no ingenuity in the make of it. It also answers the purpose of showing a bird well both during daylight and gaslight; the only drawback being that the vessels for seed and water would have to be made a separate package or unless they were placed inside, which is no improvement upon the present system. The cage was exhibited by Mr. W. Evans, and was awarded the second prize. The number in the catalogue is 1453, but the cost of construction is not stated; but it would be more reasonable than the first-prize cage.

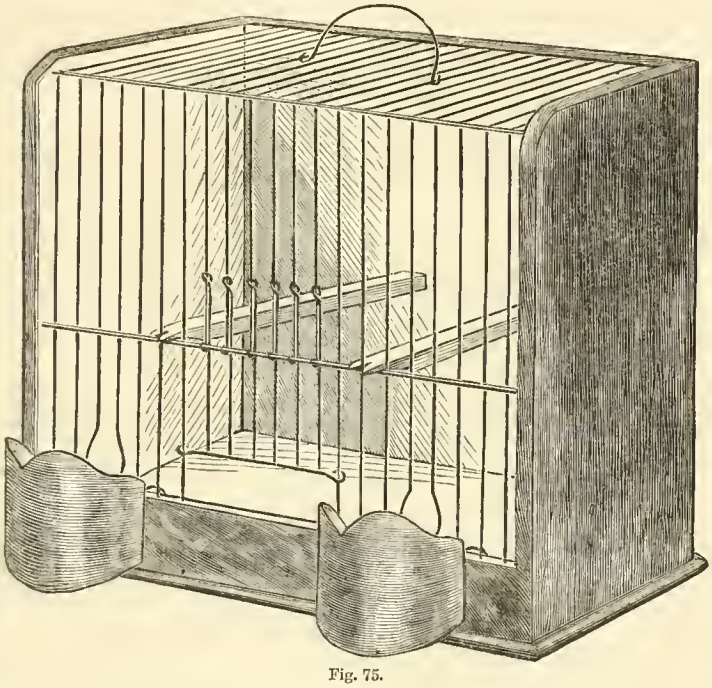


Fig. 75.

THIRD-PRIZE CAGE.

The cage numbered 1449 was not so generally approved, it being rather too small. Still this could be obviated, and the construction of it maintained. It would make a tolerably good show cage with slight alteration, one fault being that it is too deep from back to front. The catalogue states "the back of the cage screws off and on, so that it may the more readily undergo a regular cleansing." The vessels for seed and water are made to insert at each end of the front of the cage, and the wirework is turned inwards, so that the vessels can be replenished with food. The cost is stated to be about 3*s.* 3*d.* It was exhibited by the Rev. V. Ward of Hythe, Kent, and was awarded the third prize.

Altogether forty-seven cages were exhibited, some of which were tolerably good in construction. Several were far from being adapted for show cages, they being too intricate. Mr. T. Newmarch of Shoreditch and the Crystal Palace entered no less than seventeen, styled as follows:—Stag's Head Cottage, New Design, the Princess, the Gothic, the Emperor, the Optician, the Latest Style, the Snow Fall, the Acorn, the Count, the Pagoda, the Inlaid Pagoda Brass Wire (2), the Jenny Lind (2), the Stained Corner Brass Wire, and the Brass Wire Domed.

YORK AND DISTRICT FANCY RABBIT SHOW.

THE annual Spring Show of the York and District Fancy Rabbit Club was held on the 3rd inst., in the large room in the Friendly Society's Hall, Castlegate, where some first-class Lop-eared Rabbits were exhibited. The first prize and silver cup for length of ear was awarded to Mr. Dobson's Grey-and-white doe, with ears 22½ inches long by 5¼. This Rabbit also carried off the first prize for heavy weight, it weighing over 12 lbs.; it was also awarded the extra prize given by the President, Mr. Hume, for the best all-property Rabbit in the Show. It is a grand all-property Rabbit, and the condition she was shown in was a credit to her breeder. Mr. Dobson also took the first prize in the Black-and-white class with a good Rabbit well marked. The second prize was won by Mr. J. Wharton of Bramham with a very nice Rabbit. In the Yellow-and-white class Mr. Wharton took the first prize with a very nice well-marked buck. The second prize was awarded to Mr. Kittlewell for a good all-property doe. In the Grey-and-white class Mr. J.

Wharton, Bramham, took the first prize, and Mr. J. Wharton, York, took the second. In the Tortoiseshell and Blue-and-white classes there was no competition; Mr. Wharton took the prize in the former class, and Mr. Myton in the latter with two very fair Rabbits. In the Self-coloured class the competition was very keen, for all in this class were very good Rabbits; the first prize was awarded to Mr. Wharton for a grand Fawn doe, and the second to Mr. Myton for a very fine Fawn buck. The above two Rabbits divided the second prize for length of ear. Mr. Wharton also carried off the President's (Mr. Hume's) prize, given for the best eyed Rabbit in the Show, with a very fine young Grey buck.

The Show was well attended. Mr. Hume and Mr. Thornton were the Judges.

EGG VENDORS.

In your last number "W." seems to infer that most, if not all, egg buyers are unreasonable, and some dishonest. I think, however, that occasionally the egg sellers are open to criticism, as last year I bought a sitting of White Cochin eggs from one of the most successful exhibitors of that variety. Nine of the eggs were clear, three hatched, one produced a fairly good White Cochin pullet, the other two eggs inferior cockerels—a Buff and a Grouse. I unpacked the eggs myself; had no Cochins of any kind at the time, nor were there any in my neighbourhood. I remonstrated, and was civilly informed that it was a case of "reversion." I was offered a White Cochin cockerel to console me for my ill luck; which cockerel, however, has, up to this time, never arrived here.—J. H. Hutchinson.

CHILLED BROOD.

The present prospects of bee-keepers are lamentable, I fear, and abundant as may be the harvest in the fields, there must be a lack of bees to gather it in. Mr. Pettigrew has sounded the note of alarm, and well he may, for now is the middle of April, and we are still in winter, with a cold north-east wind blowing. Neither yesterday nor to-day did a bee stir in my apiary, nor have I yet seen a single young bee, and we have reached the time when they are usually seen in considerable numbers. Chilled brood, therefore, is not unlikely to be found in very weak hives. I suppose this is what Mr. Pettigrew means, and that which he advises us to cut out of our hives. But he seems to confound chilled brood with foul brood, which is a very different thing. I do not say that chilled brood may not sometimes be the cause of foul brood; but there is no inevitable connection between the two, the latter being a most virulent pestilence, destroying hive after hive, but happily not common in England; whereas the chilled brood is of very common occurrence, and easily cured by the bees themselves, as I have proved myself many times. It may be advisable to assist the bees by cutting out such brood, which, however, is not usually, if ever, found in the centre of the combs, but on the outskirts; as when on the sudden change from very warm to excessively cold weather, the bees draw in their forces towards the centre of heat, and the outer combs become deserted. I very much doubt whether chilled brood is to be found in any moderately strong hive this year, for the simple reason that the queens have not been tempted to lay eggs far from the centre of the mass of bees, or if they have, no life has issued from them. Mr. Pettigrew's treatment is very good as far as it goes for that other plague which may be raging now in some apiaries.—B. & W.

OUR LETTER BOX.

Egg within an Egg (*A. Barnwell*).—For a small perfect egg to be found within one of the usual size is not a very uncommon occurrence. It is an unexplained phenomenon, as are the occurrence of double yolks, three-legged chickens, and two kernels in a nut.

Preserving Eggs (*Agricola*).—They may be preserved in lime as you state fit for use at table; but we prefer placing them in layers alternately with dry salt in a box kept in a dry cold place.

Brahma Pullet Crippled (*J. E.*).—The pullet is egg-bound. Whenever a fowl, either hen or pullet, supports itself Woodpecker fashion on its tail, it arises from one of two things—either a serious injury in the back, or fever of the egg passage that prevents an egg from being laid. It becomes serious if it is not attended to. The cure acts like enchantment, and is as follows:—Pull out a wing feather, one of the largest. Dip it in a bottle of oil, and keep it therein till it is saturated. Then introduce it gently into the egg passage until it reaches the egg. You will have to do this two or three times; each time you withdraw the feather dip it again in the oil. Do not touch the egg or attempt to help the pullet in any other way; you may break it, and that is often fatal. This never fails.

Sick Turbit and Baldhead (*T. G. Simpson*).—We fear your two birds will be dead before these lines meet your eye. We should think that consumption, "going light," is the illness, and that the paralysis of the legs is mere weakness. You have doubtless examined the legs to see if the birds are suffering from the joint being out, or any injury, If alive, and the root of the ailment be internal, give a tea-spoonful of cod-liver oil daily. The food given seems excellent; we give the same to our own Pigeons.

Mr. Fiath's Rabbit (*C. A.*).—We have no doubt all that you say about the Rabbit is correct. As an appeal is to be made to a law court silence is only justice to all parties.

Bar-framed Hives (*T. J. H.*).—Write for particulars to Mr. Abbott, Hanwell, N. Obtain "Bee-Keeping for the Many" from our office. It contains *multum in parvo*. We know of no better or cheaper hives than Mr. Abbott's. See what we said as to "best hives" in last Journal.

Wax from Old Comb (*A Constant Reader*).—Squeeze together your old dry combs, put them into a bag of thin towelling, and boil all in a pot of clean water over a slow fire. The wax will come to the top of the water and appear there as a yellow oil or fat. With a teacup skim the wax off and strain it through a piece of muslin or thin cloth into a vessel. The wax will be improved by being boiled a second time in clean water and strained in the same way. As wax is very inflammable, great care is necessary in preventing it from boiling over into the fire.

Parsnip Wine (*Six-years Subscriber*).—To every 4 lbs. of parsnips, cleaned and quartered, put one gallon of water; boil them till quite tender; drain them through a sieve, but do not bruise them, as no treatment would clear them afterwards; pour the liquor into a tub, and to each gallon add 3 lbs. of loaf sugar and half an ounce of crude tartar. When cooled to the temperature of 75° put in a little new yeast, let it stand four days in a warm room, and then tun it. Mr. Pearson's address is Chilwell, near Nottingham.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Dats. 1875. April.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We 7	29 358	40.0	39 9	W.	45.6	52.9	37.1	93.0	97.0	0.081
Th. 8	29.588	43 6	41.5	N.E.	45.2	66.5	35.1	103.1	93.0	0.662
Fri. 9	29 896	39.8	39.7	N.E.	45 2	43.8	38 6	65.2	39 4	0.145
Sat. 10	30 149	42.8	42.4	N.N.E.	44 3	48.7	39 2	58 0	40.2	0.016
Sun. 11	30.136	44.5	43.2	N.	43.5	53.2	41.6	87.6	41.1	—
Mo. 12	30 212	41.4	41.0	N.E.	44.2	47.1	38.9	57.2	39.1	—
Tu. 13	30.267	42 0	37 8	E.	43 8	53.8	36 8	99.2	33.4	—
Means	29.943	42.0	40.8		44.5	51.9	38.0	80.5	37.6	0.904

REMARKS.

7.—Rain in the night, but a fine morning and a very pleasant day.

8th.—Rain again in the night, but fine in the morning and till about 2 P.M., then dull. Rain commenced between 3 and 4, and continued all the remainder of the day.

9th.—Rain in night and early morning; fair but dull at noon; showery all day.

10th.—Showery and damp all the day.

11th.—A dull though fair day; a few gleams of sun about noon.

12th.—Grey dull morning; and rather dull till 5 P.M., then very bright and sunny; the evening and night very fine but cold.

13th.—A cold but beautifully fine day throughout; very bright night.

The northerly winds continue; but in the early part of the week the long dry period (there was no rain of importance from March 7th to April 6th) was interrupted by a rather heavy fall. Temperature slightly lower than last week.—G. J. Symons.

COVENT GARDEN MARKET.—April 14.

The supply has been better during the last few days, but has not caused much alteration, and rather more inquiry has been made from the provincial markets for articles of general consumption. New Potatoes from Malta are selling at 16*s.* to 28*s.* per cwt.; and Early Ashleaf at prices ranging from 6*d.* to 1*s.* per lb.

FRUIT.

	s.	d.		s.	d.
Apples..... ½ sieve	2	6	to 3	6	
Apricots..... dozen	0	0	0	0	
Cherries..... lb.	0	0	0	0	
Chestnuts..... bushel	10	0	20	0	
Currants..... ½ sieve	0	0	0	0	
Black..... do.	0	0	0	0	
Figs..... dozen	0	0	0	0	
Filberts..... lb.	0	0	0	0	
Cobs..... lb.	0	0	2	0	
Gooseberries..... quart	0	0	0	0	
Grapes, hothouse.... lb.	12	0	20	0	
Lemons..... ℔ 100	8	0	12	0	
Melons..... each	0	0	0	0	

	s.	d.		s.	d.
Mulberries..... lb.	0	0	to 0	0	
Nectarines..... dozen	0	0	0	0	
Oranges..... ℔ 100	8	0	12	0	
Peaches..... dozen	0	0	0	0	
Pears, kitchen.... dozen	2	0	3	0	
dessert..... dozen	8	0	12	0	
Pine Apples..... lb.	2	0	6	0	
Plums..... ½ sieve	0	0	0	0	
Quinces..... dozen	0	0	0	0	
Raspberries..... lb.	0	0	0	0	
Strawberries..... ℔ lb.	8	0	16	0	
Walnuts..... bushel	8	0	12	0	
ditto..... ℔ 100	1	0	1	6	

VEGETABLES.

	s.	d.		s.	d.
Artichokes..... dozen	3	0	to 6	0	
Asparagus..... ℔ 100	8	0	12	0	
French..... bundle	5	0	15	0	
Beans, Kidney.... ℔ 100	2	0	3	0	
Broad..... bushel	0	0	0	0	
Beet, Red..... dozen	1	0	3	0	
Broccoli..... bundle	0	3	1	6	
Brussels Sprouts ½ sieve	3	0	4	0	
Cabbage..... dozen	2	0	3	0	
Carrots..... bunch	0	6	0	8	
Capsicums..... ℔ 100	0	0	0	0	
Cauliflower..... dozen	4	0	8	0	
Celery..... bundle	1	6	2	0	
Coleworts.. doz. bunches	5	0	8	0	
Cucumbers..... each	1	0	2	0	
pickling..... dozen	0	0	0	0	
Endive..... dozen	2	0	0	0	
Fennel..... bunch	0	3	0	0	
Garlic..... lb.	0	6	0	0	
Herbs..... bunch	0	3	0	0	
Horseradish..... bundle	0	0	4	0	

	s.	d.		s.	d.
Leeks..... bunch	0	4	to 0	0	
Lettuce..... dozen	1	0	2	0	
Mushrooms..... pottle	0	9	2	0	
Mustard & Cress..punnet	0	2	0	0	
Onions..... bushel	3	0	6	0	
pickling..... quart	0	8	0	0	
Parsley.... doz. bunches	6	0	8	0	
Parsnips..... dozen	0	2	1	0	
Peas..... quart	0	0	0	0	
Potatoes..... bushel	2	6	5	0	
Kidney..... do.	3	0	5	0	
Radishes.. doz. bunches	1	0	1	6	
Rhubarb..... bundle	0	6	1	0	
Salsafy..... bundle	1	6	0	0	
Scorzonera..... bundle	1	0	0	0	
Seakale..... ½ basket	2	0	3	0	
Shallots..... lb.	0	3	0	4	
Spinach..... bushel	0	0	4	6	
Tomatoes..... dozen	0	0	0	0	
Turnips..... bunch	0	6	0	0	
Vegetable Marrows..doz.	0	0	0	0	

WEEKLY CALENDAR.

Day of Month	Day of Week.	APRIL 22—28, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m. h.	Sun Sets. m. h.	Moon Rises. m. h.	Moon Sets. m. h.	Moon's Age.	Clock after Sun. m. s.	Day of Year.
22	TH	Royal Hort. Society of Ireland—Spring Exhibition.	59.0	37.4	48.2	51 af 4	5 af 7	40 af 9	10 5	16	1 34	112
23	F	Royal Institution at 8 P.M. Antiquaries' Society (Anniversary), 2 P.M.	59.2	36.8	48.0	49 4	7 7	53 10	28 5	17	1 46	113
24	S	Royal Botanic Society at 3.45 P.M.	58.8	36.0	47.4	47 4	9 7	morn.	54 5	18	1 57	114
25	SUN	4 SUNDAY AFTER EASTER. ST. MARK.	59.6	37.2	48.4	45 4	10 7	1 0	31 6	19	2 8	115
26	M	Royal Geographical Society at 8.30 P.M. [Auriculas.	58.0	36.4	47.2	43 4	12 7	59 0	21 7	20	2 18	116
27	TU	Manchester Bot. and Hort. Society—Exhibition of	59.3	35.7	47.5	41 4	14 7	44 1	25 8	21	2 28	117
28	W	Royal Botanic Society—Second Spring Exhibition.	60.8	35.7	48.2	39 4	15 7	17 2	40 9	☾	2 38	118

From observations taken near London during forty-three years, the average day temperature of the week is 59.2°; and its night temperature 36.6°.

ROSES FOR NON-EXHIBITORS.

DOUBTLESS there are many situated like myself, who are expected to have Roses by the score fit to cut at a moment's notice any time between the middle of March and the end of the year, to whom quantity perforce takes precedence of quality. Quantity we must have; quality we have if we can secure it. It is to those who cannot make Rose-growing a speciality, and who are not able to spend much money on it, that I wish to make these few remarks, principally, in fact, to my brother professional gardeners. Gentlemen amateurs who make Rose-growing their principal hobby must not expect anything I can say about Roses to give them any edification; moreover they do not need it. Most of them grow better Roses in the Rose season and write better English than I do, but just let the month of August arrive, and I should not be afraid to compete with some of them any time from then till the following June.

I may say at the outset that, when I commence to grow plants in quantity which I have previously not had much practice with, I always endeavour not to be dazzled too much by the successes already attained by other growers, as I know this might lead simply to blind copying. It does not follow that because a gentleman amateur has shown the best forty-eight at an all-England show that he can give the best advice to a gardener for producing a perpetual supply of Roses. No one with the least taste can deny the extreme beauty of his flowers in the exhibition stand, but it must be remembered that many of the kinds which produce the most perfect blooms, although called Perpetuals, often do not produce a dozen such blooms in a plant's lifetime. This is sometimes the fault of the variety and sometimes of the grower, who makes his plants live on "high-pressure" system.

What gardeners want are not plants which will bear two or three prodigious blooms the second season of their life and then rapidly go into decline, but such as will produce fairly good blooms in quantity throughout the season, and more of them each year as they grow older. Now this cannot be brought about by the "life-at-high-pressure" system. If a plant or an animal lives too fast it will die all the sooner. The more unnatural the conditions of life the sooner the constitution will give way. Now the natural medium for the roots of a Rose is a tolerably stiff clay, and in that natural medium it will probably continue to flourish as long as an Oak tree. Planted in light soil, made still lighter by the addition of a quantity of manure, it may produce larger petals for a year or two, which in the present day please the exhibitor and the judges, but there is not the texture in them nor yet the colour there is in flowers which are produced on a more natural soil.

The reason why Roses on the seedling Briar are better in texture and last longer than those grown on the hedgerow Briar is that the seedling Briar goes down deep into the earth, and helps itself to more natural and substantial food than the dainties prepared for it on the surface. I suppose no one now doubts the superiority of the seedling Briar; if so, let him cut a flower off it and one off an old-fashioned standard grown in the ordinary way, and compare them twenty-four hours afterwards. Next to Roses on their own roots I prefer seedling Briars; but as it takes considerable time to raise a large stock of either of these, I am obliged to fall back partially on the hedgerow Briar, and will endeavour to give my method of practice.

The Briars with the largest quantity of prickles and not more than two years old, about the size of the little finger, and with green yet firm growth, are selected about the end of September. They are taken up carefully with as many small roots as possible; all eyes and root stems which are likely to produce suckers are cut clean away, and the Briars are planted at once, before they become withered, in the stiffest soil at my command, with no addition in the shape of manurial substances. They are headed back to the required height some time during the winter, and tied to stakes, or a quantity of them are tied to a rail. They are ready for budding the following summer, and if budded as late as July the Briars are left to grow wild, and most of the buds will remain dormant till the following season. I have sometimes budded from forced plants in the end of May or beginning of June; the Briars were then cut back immediately the buds had taken, and sometimes a few good blooms would be produced the same autumn when such flowers were scarce. This, however, is only a makeshift system. I would not have a mop-headed Rose within reach of my eyesight if I could avoid it. My favourite system is to grow Roses from cuttings, but it is a slower system; it takes several buds to form a cutting, and only one to form a standard.

It is surprising how easy it is to grow Hybrid Perpetual Roses from cuttings when one once understands the way of it: the only *sine qua non* is well-ripened wood of the current year. Roses grown in the ordinary way and highly fed do not always produce sufficiently firm growth for striking; but well-grown pot Roses produce the right sort of wood in abundance—wood which cannot help striking. My cuttings are put-in at the end of October or beginning of November in the open ground where it is rather gritty. A trench is made as if for laying a Box-edging, and in this the cuttings, which have at least three or four eyes, are placed about 4 inches apart, with only one bud above the ground, a little soil is placed against each cutting to hold it in position till the line is finished, when it is filled in and trodden as hard as possible. The next trench is made a foot or 15 inches from the first one, and so on to the end.

Now if one of these cuttings fail it is by accident—as a rule, they all strike. They sometimes require treading in afresh after a sharp frost has heaved up the ground. "But does not a sharp frost kill them?" Oh no. Sharp frosts never hurt gardeners' Roses; it is only the fast-living Roses that sharp frosts can injure. I find my cuttings the wrong end uppermost sometimes after a sharp frost, they merely require putting back firmly before

the sun and air reach them to dry them too much. As for vigorous Rose plants of the Hybrid Perpetual class being killed by frost, I have never had an instance of such a thing in my practice, although I have known Oak trees receive injuries from frost from which they have not yet recovered.

The cuttings remain where they are first placed till the following November, when they are taken up carefully and potted, or they are planted either in their permanent quarters or in nursery ground 2 feet apart each way. In three years from the time of putting in the cuttings they form good-sized specimens. As my principal ambition is to obtain a large quantity of blooms, I do not object to large plants, and therefore do not prune so close as some do. I have plants now four years old which would be 4 or 5 feet through if tied out.

I ought to say that the standards grown in the clayey soil would not remove very well from it, and they are not intended for removal, but only to produce blooms for cutting. I consider standard Roses so ugly that I keep them out of sight as much as possible.—William Taylor.

GRAPE-FORCING—PRODUCTION OF LARGE BUNCHES.

We have been favoured with the following paper read by Mr. J. Hunter, Lambton Castle Gardens, at the Gardeners' Institute, Darlington, March 25th:—

"Gentlemen,—I have come before you to fulfil the promise I made to you when in the Mechanics' Institution that night so enjoyably spent in celebration of the first anniversary of the Gardeners' Institute—nobly founded by Edward Pease, Esq., for the benefit of all desirous of improving by it—you asked me to read a paper on the treatment the Vines received at my hands. The large Hamburgh bunch, being the one then in question, is included in the treatment of this house, to which I will only refer. I had the house put up in the spring of 1869; it occupied the old foundations so far as regards width, but was in length made nearly double by putting two into one. It may be interesting to some of you to know that this house stands on piles; and while I was making alterations I found after boreing that we stood 31 feet 9 inches from anything solid to work on; however, after getting a cement and brick bottom to my satisfaction, some 4 feet in depth, I resolved to have the borders made without further delay. Drainage on such a bottom as this must be efficient and thoroughly well carried out. In this case our front drain is built with brick, and pipes put inside, so that the top of the drain is a little below the cement bottom of border; at every 6 feet a line of 6-inch pipes crosses from front to back, and at every 4 feet from end to end of the house, the pipes thus forming a number of oblong squares 6 feet by 4 feet. These were filled up with brickbats to a foot in depth, and then with small stones and coarse gravel, after which it was turfed over with the grassy side of the sod downward. Soil suitable to make the border was the next important item. The park, or a portion of it, being drained previous to my coming to the gardens, I used turf which was put aside for gardening purposes, and cut fresh turf to make out with. To every six cartloads of soil I added one of lime *débris*, one of charcoal, one of burnt clay, three cwt. of broken bones, and a good dressing of clean cow manure, when the whole was turned over twice in the border, and in a few days the Vines were planted. Some of them were from one-year-old canes, and the others from eyes struck the same spring, the latter having a decided advantage at the end of the first year's growth, which advantage is maintained still. I found wireworm a most destructive enemy the first year. To check this all the surface of the border was smoothed over with the back of a spade, coated over with rape dust, laid over with thin boards, and covered up with 2 inches of old mushroom manure; this was turned over every alternate morning, then the wireworms were picked off the boards by hundreds. After this treatment the Vines carried their foliage well into December, when they were cut back to 6 feet from the bottom. I very soon after felt disposed to see what wireworms were left in the border, and also with a view of further assisting the Vines, I had an opening taken out at the back of the border and worked forward on them carefully with steel forks; every portion of the border was hand-picked and turned back until within 3 feet of the Vines; by this time we had a fine lot of roots laid bare. The soil was worked forward again, with the addition of a few more ingredients to the old, the roots being carefully laid in again. This has been done this and every year with one exception since planting, I doubt not with advantage to the Vines. At one place where I was under a noted Vine-grower I assisted in making over 100 yards in length of new Vine borders at various widths, and to my surprise, on removing the old Vines, which were considered A1 in their day, I found each had but a root or two to support them; they had taken up their abode in some quarter never made for them, as they passed out of the border without leaving a fibrous root in it. Imagine a gardener trying to assist the Vines by repeatedly watering and top-dressing such borders!

"I shall close my remarks, gentlemen, by giving the outlines of treatment the Vines had in this house. In the latter end of February the house was kept close previous to starting on March 1st, when syringing morning and evening, was well done, according to the weather. Fire heat was applied at 6 A.M., and taken off at noon. No fire heat was given at night unless compelled by frost. During the month the outside and inside borders were watered with 1680 gallons of tepid water, running on at the rate of seven gallons per minute through a fine rose. By the 15th no syringing was allowed overhead. April: for this month fire heat was turned off sooner in the day, weather permitting, but was applied immediately after shutting-up. On the 6th, so rapid was their progress that the shoots were pinched two leaves beyond the fruit and tied down. On the 13th the evaporating troughs were allowed to become dry, and fire heat used freely, front air put on at 8 P.M. and increased at 10 P.M. On the 20th they were in full flower; treatment the same, only the troughs becoming dry. 27th, all set, evaporating troughs refilled, applying front air more freely. Commenced thinning on the 1st of May; airing as last month. On the 13th watered the inside border with 3360 gallons of guano water at a temperature of 85°. After the 18th the temperature of this house was not allowed below 65°, when front air at nights was applied much more freely. On June the 15th the outside border was served with guano water the same as the inside, running at the rate of six gallons per minute, which lasted seven hours; quantity given 2520 gallons. Again, on the 29th, this house received 5040 gallons, and on July the 20th, 1680 gallons. All this was put on tepid, regular in temperature. Further than attending to the regular requirements, such as stopping, tying, thinning, &c., you have a correct statement of their treatment, except the temperatures, of which I hold an accurate account, but it would occupy too much space to enter into, as they were kept four times daily. I also experimented with the border of this house in the growing season of the Vines, the results of which I hope at another time to be able to bring before you, should they prove as suitable and satisfactory as they did last year.

"It may not be out of place, gentlemen, to raise the question, What are the advantageous points to Grape-growing in the county of Durham? Can it be the gases from the thousands of coke ovens that injure vegetation at distances off; or the immense volumes of smoke which we see continually hurled into the atmosphere, carrying with them the soot flakes which require a water-engine to play on your houses to admit daylight even dimly into them? Or the fumes from the chemical works, brought by a direct wind, sometimes overpowering the stomach of a bilious person in consequence of their nauseous stench? Some say wet localities have their advantages; here we have a dry one; in the Grape-growing season at Lambton Castle our rainfall did not exceed 10 inches. Some say soil; if so, why did not our predecessors, who used the same, do the same as us? In the way of experiment last year I had a small house of Vines planted, void of natural soil, except a small quantity which was used to surround the newly-planted Vines. The Vines have made roots from 8 to 10 feet in length, and turned out pretty good yearlings. This I only mention to show that Vines can be grown, whatever their staying powers may be, without turf or garden soil."

THE FLOWER GARDEN.—No. 1.

The cold and dreary weather of the winter that is now slowly passing away, while it has somewhat retarded many spring flowers, has injured none. The earliest bulbs have been in full beauty for some time, and the later kinds are putting forth leaf and blossom. Erica carnea, with its mass of bright pink flowers, is now at its best; Anemone coronaria now "robes the earth in beauty;" hardy Primroses are also in full bloom. The beds of Myosotis, Silene, Saponaria, and Violas which were planted about the end of last October are in excellent condition, and will form lovely masses of various

shades of white, blue, purple, pink, and yellow from April till June, when the summer bedders now in course of preparation will replace them.

It is a singular fact, that while the artistic arrangement of summer beds has met with numerous opponents, no one has ever been found to speak against spring gardening. The loveliness of the flowers, blending so softly and harmoniously with the fresh greenery of the foliage, are so impressive, so bright and seasonable, as to command universal admiration and approval. Nor is the display of vernal beauty confined to the gardens of the rich; it is open to all, the best spring flowers being raised from seed and cultivated entirely in the open air, ordinary care and painstaking, combined with timely culture, being all that is necessary to secure an ample stock of plants.

Taken apart from its intrinsic beauty, spring gardening enables one to be more deliberate than of yore in the work of providing the necessary supply of summer plants. The old high-pressure system of propagating the stock so as to be in readiness to plant the bare beds as early in May as possible has become obsolete, for the simple reason that the spring flowers continue in full beauty throughout that month. There is, therefore, ample time for the propagation of many plants for the coming summer display. Take, for example, that best of all dark crimson-foliaged bedders, Coleus Verschaffelti; one large plant or half a dozen small plants placed in a lively temperature will afford thousands of cuttings in a few weeks, every joint or eye rooting freely in saucers of sand and water. Then there are those unique bedders, the Alternantheras, most lovely in the brightness and variety of their leaf tints. A few strong plants plunged to the pot's rim in a hotbed yield cuttings freely, and which also root readily in pure sand and water. The dark-leaved Iresines, too, are propagated with equal facility. I very well remember how, when Iresine Herbstii was first introduced, each portion of stem with a joint was split asunder so as to obtain a plant from every eye. I. Lindeni too was seized upon with avidity, and was very popular for a time, but neither of them have continued to hold the prominent position at first assigned to them, for the simple reason that they are undoubtedly dull-looking and tame. In the Coleus we have both depth and richness of colour; in the Alternantheras brightness, beauty, and most charming variety; but these desirable properties are all wanting in the Iresines.

Some of the yellow-leaved plants answer best if raised now. A shilling packet of Golden Pyrethrum seed will afford some thousands of plants. Stellaria graminea aurea is easily propagated by cuttings, which grow with surprising rapidity, and emit roots from every joint. Vinca major elegantissima is also readily propagated from cuttings at this season of the year. Coprosma Baueriana variegata is a more difficult plant to increase, the cuttings rooting slowly but surely if the pots are plunged to the rim in a brisk hotbed. It is sometimes recommended to propagate this plant by layers in preference to cuttings—a tedious and unnecessary process, as the cuttings are to be depended upon. A strong batch of both yellow and white variegated Geraniums raised from cuttings now make compact little plants for edgings or second rows. Mesembryanthemum cordifolium must not be overlooked here, it is so easily cultivated and so useful withal as to merit a place in every garden. It may be raised from seed; cuttings, however, root so freely, and may be taken in such abundance from a few plants, that they are altogether preferable to seedlings. Its chief points of excellence are found in the peculiar softness of its foliage, in which pale green and yellow are agreeably blended, and in its recumbent, dense, and spreading growth requiring very little attention after it is once established.

All the grey-leaved plants may now be propagated with tolerable ease and expedition from cuttings, Santolina, Leucophyton, Cerastium, Achillea, Gnaphalium, Centaurea, and Cineraria maritima, all rooting freely in a lively moist temperature. The Centaureas and Cinerarias may be raised from seed, but the seedlings grow so slowly that they are of very little use till the second year. Both species prove hardy in a dry, elevated, and open situation, forming handsome specimens if planted singly. The Cineraria with its silvery stems and bright grey deeply serrated foliage possessing a brightness and beauty that is as remarkable under favourable circumstances in winter as in summer.

The exquisite effect of Tagetes signata pumila under skilful management, so well exemplified at the Crystal Palace last year, will probably induce many persons to assign it a prominent position in more than one flower bed for the coming season. I would not advise anyone to attempt its culture who cannot afford it almost daily attention, for it grows so freely and flowers so persistently throughout the season, that a few days' neglect would lead to the production of much wild growth and of many flowers which ought always to be removed in the bud. If the seed is sown in gentle heat now, the plants will be in a suitable condition by the time they are required for the beds.

Lobelias, Violas, Tropæolums, and Ageratums are all best increased from cuttings. Violas raised now would, of course, be somewhat late, but they would be highly ornamental in autumn.—Edward Luckhurst.

ROYAL HORTICULTURAL SOCIETY.

April 21st.

This, the second spring Exhibition, was held under the auspices of a pleasant summer-like day. Even the most tender plants could be moved with safety, and their admirers could enjoy them as flowers ought to be enjoyed, in leisure and comfort—if the plants had come. The collections were arranged in the western conservatory arcade. More than half the classes were empty, and we cannot describe the Exhibition other than an ordinary one, although the Rhododendrons were massive, the Orchids interesting, the hardy flowers as attractive as any class in the Exhibition, and the cut blooms of Maréchal Niel Rose simply splendid.

The first class in the schedule was for twelve forced Rhododendrons (open). The only collection was from H. Lane and Son, Great Berkhampstead, with well-bloomed plants of Nero; Blandyanum, a fine plant; Limbatum; Queen of the West, very effective; Auguste Van Geert, with immense trusses of blooms; Etandard des Flandres; Towardianum; Fatuosum flore-pleno, very lively; Minnie, an attractive light variety; Sir Isaac Newton, a rich dark; Imperatrice, and Lord John Russell. All the plants were exceedingly well bloomed, and were healthy and fresh. In the corresponding class for amateurs there was no entry.

In the Orchid class for nurserymen Mr. B. S. Williams was the only exhibitor. His collection comprised a good plant of Dendrobium nobile, Cypripedium villosum with fourteen flowers, Odontoglossum luteo-purpureum with two fine spikes of a dozen blooms each, Camarotis purpurea, Masdevallia Lindeni, and Odontoglossum phalænopsis. The amateurs' class was empty.

In the Cineraria classes for nine distinct varieties (nurserymen), Messrs. Dobson & Son, Isleworth, had large but rather loose plants of Wonderful, Premier, Snowflake, Hamlet, Duke of Cambridge, Ensign, Lady Hamilton, Beauty, Andromeda, and a miserable semi-double variety. In the amateurs' class for this plant there was no competition.

Hardy spring flowers in pots. These were very effective, the first prize for eighteen varieties being secured by Mr. R. Parker, Exotic Nursery, Tooting, with bright examples of Doronicum cordifolium, D. austriacum, Cardamine trifolia, Tritelia uniflora and T. uniflora lilacina, Primula elatior Early Admirable very rich, Scilla italica, Spiræa japonica, Saxifraga media, Orobus vernus, Iberia linifolia, Muscari racemosum, Dielytra spectabilis and D. spectabilis alba, Orobus cyanus, Primula elatior Golden Plover, Pulmonaria siberica and Ranunculus amplexicaulis. Second honours were taken by Mr. Dean with smaller but not less attractive plants, among which bedding Pansy White Swan, Viola Royal Blue, Lithospermum prostratum, Primula cortusoides in variety, Polyanthus Black Knight, White Daisies, and Myosotis, were the most effective. This was a compact, well-grown, and interesting group.

The Auricula classes were empty save that for twelve Alpines. Messrs. Dobson & Sons staged plants of no special merit.

In the miscellaneous contributions a small but interesting collection of double, single, and fancy Polyanthuses were sent by Mr. Dean. Of the single varieties Viceroy (primrose), and The Bride (white), are evidently good bedders, and a large laced variety Hussar is effective. Some of the double varieties were also exceedingly rich.

Mr. Williams exhibited an attractive group of plants, comprising choice Palms, Pandanus Veitchii, Anthurium Scherzerianum, a nice plant of the Sweet Toxicophlæa spectabile, Orchids, &c.

A batch of double Cinerarias were sent by Messrs. E. G. Henderson & Son, two or three of which were really double, the remainder being more or less successful attempts to break from the single form. The same firm also sent some single seedlings containing good flowers.

The ninety-six cut blooms of Maréchal Niel Rose from Mr. Walker, nurseryman, Thame, Oxon, deserved a medal for their great excellence. Nothing in the Exhibition was better in quality than these fine, fresh, rich blooms.

The Society's Gardens came to the rescue with gay collections of plants, in which the pots of Solomon's Seal showed to ad-

vantage. The Azaleas, Acacias, Narcissus, &c., were well-bloomed hardy plants.

Withholding the prizes for last year's shows and diminishing the amounts this year is having its natural effect on exhibitors, and restricting the scope and interest of the exhibitions.

Fruit was limited to the following contributions:—For two bunches of Black Grapes the first prize was awarded to Mr. W. Bones, gardener to D. McIntosh, Esq., Havering Road, Romford, for compact and well-coloured bunches of Black Hamburgh, the second honours going to Mr. Ridout, gardener to W. S. Brown, Esq., Woodhatch Lodge, Reigate, for Alicantes, fine in berry and colour, but losing freshness. Two bunches of White Grapes were represented by small bunches of Golden Hamburghs from Mr. Bones, who exhibited also a basket of highly-coloured Tomatoes Earley's Defiance, which were worthy of recognition. Cucumbers were repreaented by a good brace of Tender and True from Mr. J. Lane, gardener to Major-General Fytche, Pyrgo Park, Romford; and a brace of Marquis of Lorne from Mr. Rapley, gardener to R. Hudson, Esq., Clapham Common, which took first and second prizes respectively.

Fruit Committee.—Henry Webb, Esq., in the chair. Mr. Sidney Ford, gardener to W. E. Hubbard, Esq., Leonard's Lee, Horeham, sent six dishes of Apples and two of Pears, which were very well kept, and to which a letter of thanks was awarded. William Terry, Esq., Peterborough House, Parson's Green, sent two large clusters of the fruit of Vanilla, perfectly ripe and admirably grown. The Committee unanimously awarded a cultural commendation. Mr. John Monro exhibited a basket of Keens' Seedling Strawberries, grown from cuttings. Mr. Monro also sent six fruit of his Cucumber Duke of Edinburgh, also three bunches of Grapes, Foster's Seedling, Buckland Sweetwater, and Madresfield Court. These fruit are from pot Vines taken from the open ground on the 4th January, 1875, into 80° of heat at once, where they have been kept ever since. There were fifteen bunches on the Foster's Seedling, seventeen on the Madresfield Court, and eight bunches on Buckland Sweetwater. A letter of thanks was awarded for the collection. Mr. Bond, gardener to G. A. Smith, Esq., The Beeches, Weybridge, Surrey, sent two Vines in pots of Foster's Seedling, fifteen months from the eye. They were awarded a cultural commendation. Messrs. Lee of Hammersmith sent a dish of Bess Pool Apple. Rev. George Kemp, The Vine, Sevenoaks, sent a dish of Sturmer Pippin, very well kept, and of excellent flavour.

Floral Committee.—R. B. Postans, Esq., in the chair. A small but charming group of Orchids was contributed by Messrs. James Veitch & Sons. Phalænopsis Luddemanniana ochracea, from the Phillipine Islands, is a distinct waxy gem of a curious admixture of colour of green, pink, and scarlet. Cattleya elegans alba had a spike of four beautiful blooms. Saccolabium ampullaceum had half a dozen glowing spikes. Phalænopsis amabilis, and P. Schilleriana, and Odontoglossums in variety, were in excellent order. The same firm also exhibited a very distinct Dracæna, named hybrida, for which a first-class certificate was awarded.

Mr. Kinghorn, of Sheen Nursery, Richmond, exhibited a plant of his new and curious Fuchsia procumbens. It is very singular and pretty, as much like a Tropæolum as a Fuchsia. It is undoubtedly interesting by its distinctness. Mr. B. S. Williams sent a new Echeveria, E. de Smetiana, with very silvery foliage; also plants of Franciscea magnifica with very fine flowers. Mr. Z. Stevens, Trentham Gardens, sent a splendid plant of Cœlogyne cristata (lemoniana), and received a vote of thanks.

Mr. Bull sent Tillandsia musaica, Dracænas, and Arguloa Turneri. Mr. Bond, gardener to G. A. Smith, Esq., sent good plants of the Orchids Brassia maculata and Oncidium altissimum.

Mr. H. Bennett, Stapleford, Salisbury, had a first-class certificate for twelve pot plants of the new and excellent Rose Capt. Christy. He had also beautiful cut blooms of Duchess of Edinburgh, Madame Caroline Kuster a soft yellow, Hippolyte Jamain, and Mdlle. Marie Cointet. Mr. W. Paul exhibited a good dark Rose Villaret de Joyeuse, and a sweet-scented light variety Amelia Haste.

Mr. Eckford again sent some of his fine laced Polyanthus; they are very distinct and bright. Mr. R. Dean exhibited a double white quilled Daisy of fine form and substance, which received a first-class certificate. A collection of fifty varieties of Narcissus was sent by Rudolph Barr, Esq., Tooting. Their variation in form and colour, their brightness and perfume, rendered them very interesting. They merited the vote of thanks which was awarded them.

THE LEAMINGTON BROCCOLI.

The seed of this new sort of Broccoli was distributed with the prestige of a first-class certificate from the Royal Horticultural Society, thus raising hopes and expectations that it would prove not only different to, but a decided improvement upon existing kinds. The earliest plants of it here are from seed sown March 18th, 1874, and they are now affording a fine supply of what I consider to be the best heads of Broccoli I have ever sent to table.

In form the heads may be compared to a cone with the sides slightly bulging out, some tapering more to a point than others; all are extremely compact, white, and delicate, and are so closely enveloped—that is to say, protected by the leaves, that some care and pains are necessary in cutting them away in order to find the treasure which they guard so closely and so well.

Thus, then, the expectations of a "good thing" raised by the certificate are in this, as in most other instances, fully realised. I lay some stress upon this, because of late it has become very much the fashion to decry the Royal Horticultural Society, and to question its utility. Now, I for one can undertake to say that if the Leamington Broccoli had been offered for sale without having gained the high award which its great excellence so justly merits, I should not have been tempted to purchase.—Edward Luckhurst.

FLOWER-BEDS IN ASWARBY PARK GARDENS.

The gardening at Aswarby Park, the seat of Sir Thomas Whichcote, Bart., near Folkingham in Lincolnshire, is well

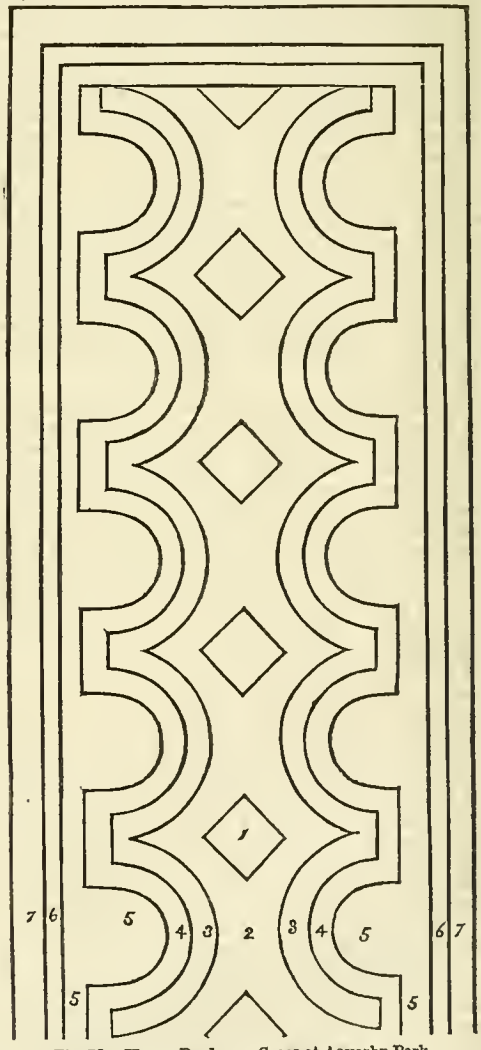


Fig. 76.—Flower Border on Grass at Aswarby Park.

Border No. 2, 80 Feet by 12.

1. Centaurea candidissima.
2. Coleus Verschaffeltii.
3. Christine Geranium (pink).
4. Miss Kingston Geranium (silver variegated, with the flowers picked off).
5. Lobelia pumila flore-pleno (one mass of bloom).
6. Golden Feather.
7. Echeveria glauca metallica.

known and admired. Mr. R. Nisbet, the head gardener, has most obligingly enabled us to give details of some of the flower arrangements.

It only needs reference to the plants used and their mode of disposition, to appreciate how effective is Mr. Nisbet's mode of planting. The flatness of the large bed is artistically broken by the use of Dracænas, Aralias, and Acacias. The border planting is an example of brightness without glare.

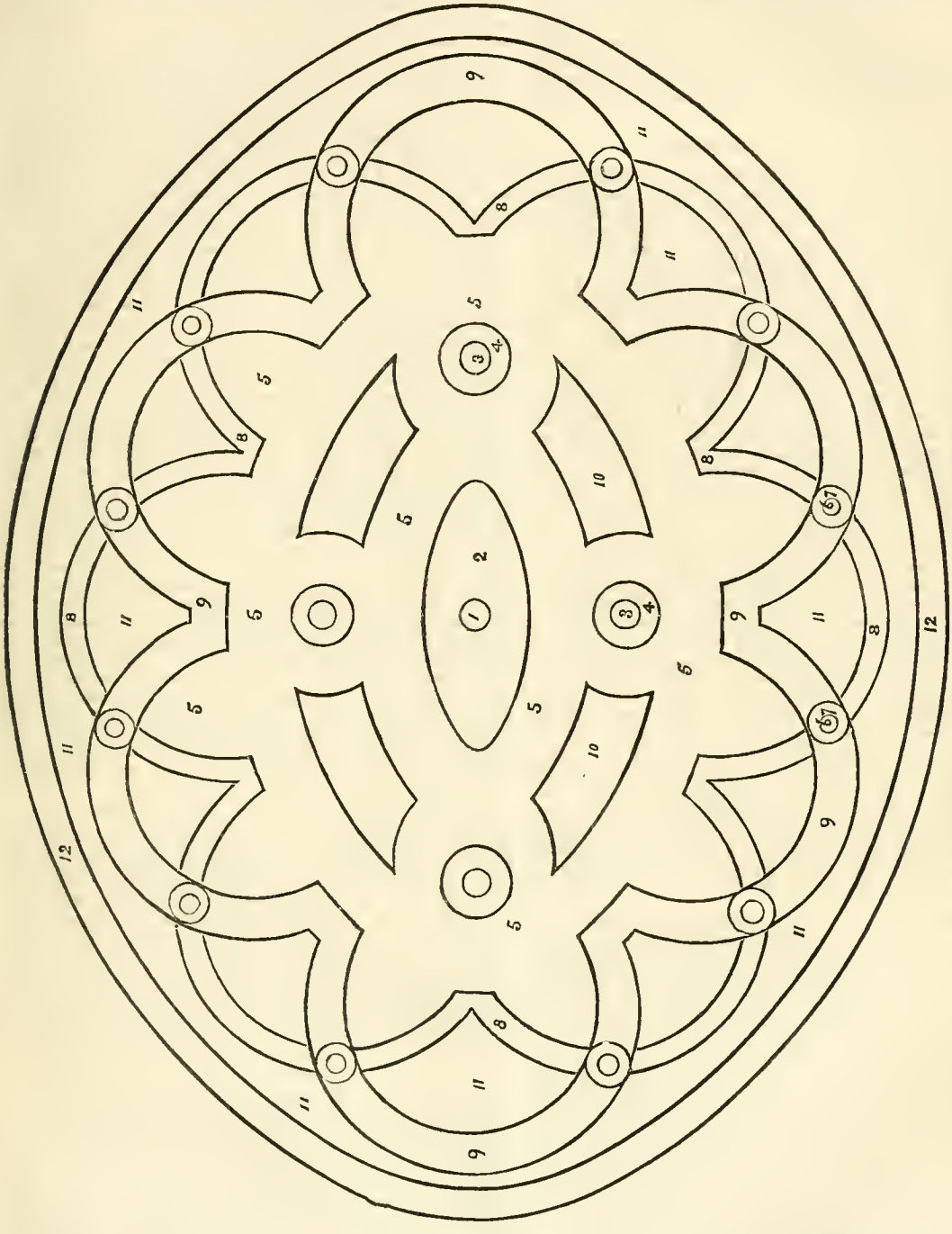


Fig. 77.—Flower bed on grass and arrangement of the planting at Aswarby Park.

Bed No. 1, 50 Feet by 36.

1. Dracæna australis.
2. Calceolaria Kayi, yellow.
3. Aralia papyrifera.
4. Verbena venosa.
5. Alyssum saxatile variegata.
6. Acacia lophantha (seedling plants).
7. Iresine Lindeni.
8. Viola Perfection.
9. Harry Hieover Geranium.
10. Vesuvius Geranium.
11. Mesembryanthemum cordifolium variegatum.
12. Edging of Ivy.

The garden is always much and deservedly admired by visitors. It is unquestionably under able supervision.

To save space we have only had half the border engraved, as the other half is merely a repetition. Another border exactly similar balances it.

STANSTEAD PARK CABBAGE LETTUCE.

I should like to say a word in favour of that excellent hardy winter Lettuce Stanstead Park Eclipse, for it has often stood me in good stead when all others have failed. At the present time I should have been quite at a loss without it for early spring salads. By early salads I mean those gathered entirely from the open borders, and which are always required at this season of the year to follow the winter frame salads.

The Stanstead Lettuce is a strong-growing kind, almost as large as the Neapolitan, and so robust that it not only withstands the severity of such a winter as the past perfectly well, but grows and "hearts" so quickly in spring that it is fit for use long before the other varieties. It is not a desirable sort

for frames, its large size causing it to occupy, and in reality to waste, much valuable space; all the large spreading outer leaves being worthless for salads.

The crop that is now being used is from seed sown August the 1st, and transplanted along the foot of a Peach wall facing the south on September the 12th. All the Year Round Cabbage Lettuce and Walker's Sugarloaf Cos were sown and transplanted to a similar position on the same dates. They will form a capital succession to the Stanstead, and will be followed in turn by Bath Cos and Kingsholme Cos, which had been sown a fortnight later.—Edward Luckhurst.

ROSE TREES AND FROST.

I have read Mr. Peach's communication, and fear that on this occasion we must still be content to differ. I am gratified to hear that, as a rule, our opinions agree. For my own part I have to thank him for many interesting communications, and have usually found that my own experience coincides with his both in the matter of Rose and Strawberry culture.

Mr. Peach admits that old wood may be enfeebled by the growth of young wood from the base, but thinks that this will not account for the frost killing old wood still strong and vigorous. One does not, of course, dispute the fact that frosts are occasionally severe enough to cut down all Roses to the ground whether strong or weak. This is not the point at issue. What we want to discover is, How it is that the old wood is, as a rule, the first to succumb to frost, while the strong green shoots thrown-up from the base hold out to the last. What makes the difference? Mr. Peach introduces the Delphinium formosum as an instance of a plant, the young growth of which will stand a very low temperature in spring, but the matured growth of which is cut down by a slight frost in autumn. It is hardly safe, however, to compare the Rose with other plants, or we shall be lost in a maze of difficulties over the vagaries of frost and the surprising difference in its effect on various forms of vegetation. Why, for instance, should 1° or 2° of frost suffice to destroy the Heliotrope, while the Calceolaria by its side endures without injury some 8° or 10°? I am not aware that there is any such vast difference in the structures of the two plants to account for this difference of constitution. The frozen sap would have an equal chance of expansion in each, and yet one dies and the other survives. It would be useless to multiply instances of this sort. Every gardener knows that the appearance and structure of his plant is but a very slight guide as to the climate it is fitted for; and does this not plainly prove that, although the action of frost is to a certain extent mechanical, its effects differ, not so much from differences in the structure of plants as because the Creator has given to each plant a constitution which fits it to occupy the position in which it is placed, and renders it capable of enduring without injury the various extremes of temperature to which it is usually exposed in its native home?

Now, in the case of Roses, when one finds that certain plants and certain portions of plants which ought to be as hardy as the rest which survive, nevertheless succumb to frost, I believe we must look further than for some mere difference in the structure of the wood or the mechanical action of the frost. Observation tells me that the more vigorous the plants are the better they are able to withstand a low temperature; that when a number of plants are destroyed by frost it is usually the youngest which survive; that when portions only of plants are destroyed it is usually the young strong wood that escapes; that standards, owing to an artificial system of culture, are, as a rule, less hardy than dwarfs, and in case of severe frost succumb first. Mr. Peach says that in 1860 he lost ninety-eight standards out of one hundred plants which, he adds, were pruned in the very manner I advocated in my last; but surely Mr. Peach does not suppose that I was referring to any but dwarf Roses when I pointed out the two methods of cultivation whereby the wood might be kept in a vigorous and frost-proof condition?

The loss of so many standards confirms me in my opinion that they died from the effect of the low temperature acting on a weakened constitution, which rendered them less hardy than the same varieties on dwarf stocks. If it were owing to any peculiarity in the structure of the wood, why were standards only killed? Surely there must have been some young shoots among them as well as old, and surely the structure of the wood cannot differ so materially on standard and dwarf stocks. Now, as I pointed out in my last, if one desires to keep either a plant or a shoot strong and healthy, the circulation of the sap must be fully maintained during the season of active growth throughout the whole of that plant or shoot. Anything which tends to impede, obstruct, or divert this circulation tends also to lower the constitutional vigour of that portion which loses its necessary supply of sap. The tendency of most Roses is to renew their wood periodically from the base, and thus to maintain their life and vigour—the old wood gradually dying away, and the young shoots taking its place. The hedgerow Briar is no exception to this general rule, as anyone may see for themselves who chooses to take a stroll down some country lane where Briars abound. In the autumn he will see shoots from 6 to 10 feet long standing up above the hedgerows as thick as a man's thumb, most of which spring from the base of the old wood. Does the frost, I wonder, ever kill any of them as long as they are allowed to manage themselves in their own way? But they are torn violently from their homes, decapitated, mutilated at their heels, planted without roots in a dried-up condition, and when they do manage to live are put to the torture in various ways during their season of active growth. The stocks try to make roots, and throw out a multitude of side shoots to forward their endeavours. All but three or four near the top are removed; the consequence is rooting is checked, and feeling a trifle ill they throw-up suckers, which are at once pulled-up. At budding time two or three buds are inserted of a Rose probably which has about a tenth part of the natural vigour of the Briar. The next season, after enduring still further torture, the buds start. At the same time the poor Briar makes another effort to prolong its existence in the shape of more side shoots and a few more suckers, all of which are ruthlessly removed, or they would rob the bud. Well, the bud grows and forms its head, and a grand head it is; so unnaturally small compared with its sturdy trunk that it is utterly unable to draw up a tenth part of the sap which that trunk requires. It can supply its own little wants, it is true; but what can its half-dozen leaves do for the Briar in return? Why, it can scarcely breathe. The weaker the variety budded on the stock the more suckers it will now try and throw up, and the sooner, if those efforts are defeated by the careful rosarian, will it languish and die. Mr. Peach knows as well as I that some sorts of Roses which are weak growers will only drag out a brief existence of one or two seasons on the standard Briar do what one will, and that a good sharp frost will kill scores of these weaklings. People wonder how it is that so many of their plants die. They think it is the frost, or the drought, or the green fly; anything, in short, but the real reason—that they are cultivated in opposition to Nature.

But, cannot a standard Briar be kept healthy? Yes, by budding it with a very strong-growing variety. I have just cut down an old standard Gloire de Dijon which must have been nearly fifteen years old. It had shoots from 10 to 20 feet long. The stock increased in thickness every year, and never threw up suckers. Why? Because the large head supplied all its wants, and kept up the circulation of the sap to and from the roots, for one is quite as necessary as the other. Bud a Briar standard with Charles Lawson or La Ville de St. Denis—grow it well to form a large head, and it will live almost as long as you like, and defy all but the severest frost. Why did the frost kill Mr. Peach's Briars? Answer—because there was not one of them truly healthy. If anyone can prove that I am wrong I am ready to stand corrected.—R. W. Beachey.

ORCHIDS AT MESSRS. VEITCH'S NURSERY.

As an addition to the excellent report which appeared in the Journal (page 158), a few remarks on some of the Orchids which have subsequently flowered may be interesting to some readers. Orchids are being more extensively cultivated than formerly, and many persons take to this class of flowers as a hobby who know but little of gardening generally; they give much personal attention to their pets, and in time become intimately acquainted with their requirements. In some instances gentlemen begin collections of Orchids and engage a gardener who knows but little more of the business than they do themselves, and gardener and master acquire a practical knowledge of the plants together very often by paying well for it. Leaving out the mistakes made in culture, there is one grievous error very often made, and that is buying collections of cheap plants. I think it was Thackeray who said in one of his novels, "Some persons buy their wine cheap and good; I buy mine dear and good." It is the same with Orchids: you

cannot buy them cheap and good, and, what is more, the dearest plants are the cheapest in the end.

After a person has become acquainted with the merits and rarity of the different species, he can purchase in any market, but until this knowledge is obtained the best way is to trust to some firm who make a speciality of them; but do not purchase collections of any species at a few shillings per dozen. One ought to have considerable knowledge of the culture of an Orchid before he ventures to pay £50 for a plant. Indeed as much as from fifty to a hundred guineas are sometimes given for good healthy specimens of some of the more rare species.

What are designated cool Orchids are now becoming very popular, and amongst them a large proportion of the numerous species of Odontoglossum are amenable to this treatment. The latest addition to this class is O. Warscewiczii. The habit of the plant much resembles the beautiful O. vexillarium, and, like it, is not only very scarce in its native habitat, but it is also very difficult to bring plants over alive, so that it is not likely ever to become common. The flowers are not so striking in appearance as the allied species; they are white, with pale yellow at the base of the labellum; but as the plants are only recently imported it would not be fair to pass a final opinion upon them.

One thing I would say as a warning to cultivators—Do not grow this species, nor O. Roezlii, O. vexillarium, nor even O. citrosmum in the coolest house with O. crispum, O. triumphans, and other allied species, as there is great risk of losing them in the winter. I heard a gentleman say that he had lost all his O. Roezlii by keeping them too cool, and only saved O. vexillarium by placing the plants in a house with a higher temperature. I was informed at Messrs. Veitch's that O. Roezlii succeeded remarkably well in a minimum winter temperature of 60° or 65°. Some plants of it at Loxford Hall grown in a winter temperature of 45° showed evident signs of being uncomfortable, and improved when removed to a warmer house. The plants that suffered most were those that had not ripened their young growth.

In your report O. crispum (Alexandræ) and O. triumphans are mentioned. Not only are they very distinct from each other, but they are the very cream of the cool-house species, and the flowers will remain in full beauty for three months or more during the winter season. O. Andersonianum is a very fine species, but little known; it is no doubt a natural hybrid between O. crispum and O. odoratum. I had a plant of it amongst a lot of plants presumed to be O. crispum. Some of the varieties are very near O. odoratum and merely show the cross, others are but little removed from O. crispum. An important addition has also been made to the Masdevallias: it was discovered and sent home by the Messrs. Veitch's collector Mr. Davis, after whom it has been named M. Davisi. The growths somewhat resemble those of M. Veitchii, and the flowers are said to be like those of M. ignea in colour. Whether superior to that variety remains to be proved. It had the appearance of being a free-growing species.

Passing to the houses containing those from warmer latitudes it must be admitted that, beautiful as are many of the species grown in cool houses, they must give place to the others. Can any flower be of a more delicate transparent white than the magnificent waxy blossoms of Angræcum sesquipedale? but it is a Madagascar plant and luxuriates in a very high temperature. Mr. Darwin has stated that the moth or butterfly that could suck the honey out of the extremity of the long tail-like appendage attached to the flowers must be furnished with a proboscis 18 inches in length. Then we have the glorious Dendrobiums from India. D. lasioglossum was in flower. These are very small but very beautiful. The sepals and petals are white, and the labellum streaked with purple. In striking contrast to it were some beautiful specimens of D. primulinum giganteum. This is a magnificent variety of the species; the spikes are pendulous, and show off to advantage the splendid blush-white flowers; the large lip is stained and streaked with delicate purple. No collection should be without this fine plant. D. crassinode had two young growths with twenty flowers, white with an orange blotch at the base of the lip. A fine plant of the extremely rare D. Wardianum will soon be in flower. The growths were very strong, and thirty-five unexpanded flowers were counted on three spikes: the strongest spike had fifteen flowers. Dendrobium speciosum was very fine. The flowers are creamy white, and though not very striking in appearance individually, show up well on the plant.

Vanda Cathcarti was making strong growth and shows three spikes. Vanda Parishii, which has only flowered once or twice in England, is making very vigorous growth. The plant shows two very strong spikes. The flowers are not very striking; they lack the bright clear colour of V. suavis and some of the V. tricolora, but they are sweetly scented. V. cœrulescens from Burmah is also in flower. The small plant is furnished with an elegant spike of the richest blue flowers I have yet seen in Orchids. This is not an exhibition variety, but it is "a gem of purest ray serene" notwithstanding.

There is also at present in flower a plant of a natural hybrid Phalænopsis. A quantity of imported plants of what was presumed to be a natural hybrid was sold at the rooms of Mr. J. C. Stevens last year. They were named P. intermedia. The cross was stated to be between P. amabilis and P. Schilleriana. They have all, I believe, turned out to be P. amabilis. Of the species in flower at the Exotic Nursery there can be no manner of doubt, as the plant has the marked characteristics of both parents, P. Schilleriana and P. rosea: it has been named P. Veitchii. Many attempts have been made in this country to raise seedling Phalænopsis, but all such have proved abortive. Seedpods can easily be obtained with millions of good seeds, and these have also been known to vegetate, but flowering plants have never been obtained.—J. Douglas.

NEW PLATYCERIUMS.

There may be seen in our nurseries at the present time two Platyceriums (Stag's-horn Ferns) of great interest and beauty—one the rare *P. Wallichii*, now in first-rate condition at Mr. B. S. Williams's, Upper Holloway nursery; the other *P. Willinckii*, a magnificent new species in the possession of Messrs. Veitch & Sons of Chelsea. The amusing similarity of the names (pronounced, of course, Wallick-ey-i and Willinck-ey-i) has induced one of our correspondents to send us the following lines:—

THE RIVAL PLATYCERIUMS.

Said Chelsea, "Ma'am, now have you seen my best of all the genus?—
My Platycerium—lovely mum; and just a word between us,
It christened is *Willinckii*,* none ever saw its equal!"
Then Holloway, she tossed her head, and said—as in the sequel,

"I don't know nothing 'bout your brat, but I've a lovely treasure,
A Platycerium (next to new) whose beauty has no measure.
Mine has been called *Wallichii*; yours must be an impostor,
Some wretched Fern from Dutchman's land, bought perhaps of a coster."

They can't agree about their names, no matter how they try,
Wallich, Willinck, with vowels two, which makes them all my "i."
In such a case what can be done? Pray how is it to be, sir?
With Pomp and Cæsar much alike, especially poor Cæsar.

BEDDING GERANIUMS, AND AN EASY WAY TO PROMOTE THEIR GROWTH.

Your correspondent Mr. Osborne has pointed out a very useful and convenient way of preparing the bedding Geranium for planting-out. As a modification of the plan has been adopted here, and as it may not be known to all to whom it may be useful, I append the mode in which we have been in the habit of treating them more or less extensively for nearly twenty years. I believe it was adopted before that time by others with some little variation, but in our case the mode from the first was much as we practise it now. Instead of the term "sodding," as Mr. Osborne has it, we have been in the habit of calling it "mossing," as we use moss more than anything else. I almost envy Mr. Osborne using the home-grown tying material, New Zealand Flax, but not on that account alone, but on the supposition of his having so many other plants outdoors that we are compelled to keep under glass; but as a substitute for the Russian mat, I think we have more than once managed to have some very good home-grown matting from Lime trees that have been cut down. In a general way, however, the foreign article has been put into requisition, and with care in the selection the cost of the material need not be a serious obstacle.

Our mode of operation is this:—The Geraniums are such as have stood the winter in shallow boxes, which with us are all of one size—viz., 2 feet long by a trifle over, 1 foot wide, and for Geranium cuttings are 3 inches deep, while for stowing away old plants they are the same size in length and breadth, but about double the depth; but as it is mostly the former that we are now alluding to, I may add that in a usual way about seventy cuttings are put into such a box in September, and allowing for losses during the winter, if the average of strong-growing plants exceed forty when they are potted-off or

* Named after M. Willinck, a Dutchman.

are mossed, they have kept pretty well. We do not commence the mossing process so early as Mr. Osborne from not having frame accommodation in March, and also from the wish we have of each plant furnishing one or more cuttings before it is disturbed. About the 10th of April, and from that time up to nearly the end of the month, is the time we have found most convenient, as our means of shelter is very homely. I may say that some time before we begin some boys are sent into the woods where moss abounds and a large quantity is obtained, which on being brought home is looked over and sticks, especially thorny ones, are picked out, and a tub being filled with it and stamped down, boiling water is poured over it so as to saturate the moss. This scalding not only destroys all insect and animal life that may be lurking inside, but destroys vegetable life as well, and also the seeds of noxious weeds that may be troublesome hereafter. This done and whether the moss be allowed to dry or not it is ready for use. A quantity of soil being handy on the potting-bench, the boxes of Geranium plants are brought out and are shaken-out with as little injury to their roots as possible, and the operator placing a piece of moss flatways on his left hand adds a little soil in the centre of it, then lays on the cutting with its roots on the soil, putting at the same time a little more soil over that, then folds-up the moss all round the whole, and wraps round it a piece of matting, which for convenience is prepared into lengths to go about three times round the moss. When completed it resembles a small plant growing in a little mossy bundle of the size of a large goose egg, the moss reaching to the lower leaves. This work, as Mr. Osborne justly remarks, is suitable for a wet day. Boys with a little experience often excel their seniors in quickness of mossing, and a great many Geraniums may be thus disposed of in a day.

The next question is, What to do with them? No doubt a frame placed on a properly made-up hotbed would be best, but the usual frames required for forcing are generally always in use at this time, that some other makeshift has to be adopted. In our case we have some old spare lights, and a rough frame is made by nailing four 9-inch wide boards together the size of about three of the lights, which is about 10 feet by 6. These boxes with care will last several years, and are useful in many ways. I may also add that we generally have plenty of leaves, which with a little dung added, form a very suitable hotbed, which, however, is only very slight, and the bed is usually made higher on one side than the other to allow the rain to run off the lights; the frame is put on, and a little soil is put in, the tied-up plants are packed in rows almost touching each other, and very often partly slanting to keep their heads below the top of the boards, a little soil being pressed against them as the work proceeds. The frame is speedily filled, and if the moss has been dry when used a little watering is given, but if otherwise, very little is wanted while they are there, and the lights which are put on at once may, nevertheless, be partly removed on fine days, and entirely so before planting-out time, when the plants will be found to have formed a set of bearded roots projecting through the mossy ball on all sides, and as we usually put a good proportion of leaf soil into the compost they are grown in, much of it adheres to the roots and travels with them to their final quarters. We have thought the roots of such plants are in a better condition for transplanting than the pot-bound plants often met with, but on this head I have some misgivings, and am not certain but the porous material around the ball of the plants allows a very dry season more chance to do mischief than when all is more firm and solid. Although I have had many years' experience with mossed plants on as extensive a scale as most people, I will not undertake to give a positive opinion on that head, but it has many other advantages in its favour, which it may not be out of place to mention here.

First of all it will be generally admitted that the months of April and May are exceedingly busy months in all gardens. Anything that tends to diminish labour at this season is a boon, and not the least important matter is watering, which everything in pots require at this season; and although the rose watering pot may be dexterously used so as to water a good many at one swing, whether they all want it or not, the repetition of the process consumes time, besides which water is not always so plentiful as could be wished. Now, plants treated as has been shown require very little water indeed; nay, I am not sure but some frames we have had were never indulged with any given in an artificial way.

Secondly. When planting time arrives there is a vast deal less carriage in removing a thousand moss-tied-up plants than the same number in pots, as the former can be heaped-up on the hand-barrow or basket without much damage, and be only a fraction of the weight of the potted plants, besides which there are no pots to return to the store, and all the extra trouble of washing and preparing them for the purpose is avoided. Many other reasons might be urged in its favour, which can be left to the general reader to consider for himself in accordance with his individual means of meeting either the tying-up or potting system as his means may allow; at the same time due allowance ought to be made for the cost of pots if they be decided upon, for notwithstanding all care a certain breakage and loss will occur whenever they are used.

With regard to the relative time of the potting or tying-up, there is no question but the first is the quickest, but the stowing away in a becoming manner makes the two about equal, for as a piece job men have offered to do the tying-up at 6*d.* per hundred, which is not much, but the other advantages or defects of the system are likely to be more studied.

While treating on this subject, I may say that other plants as well as Geraniums may be managed this way, as Verbenas, Heliotropes, and the like, but Petunias are so liable to become unwieldy at the neck that I have never done much good with them; but sometimes a row or two of something else than Geraniums is useful in separating two kinds from each other. This, however, and many other matters of detail will suggest themselves to the general manager. When moss falls short we have used short grass from the lawn instead, but it is not so good, and had better go to assist the heating material. Glass lights as covering have also been dispensed with on an emergency, and a rough framework to support mats at night has been adopted; it is needless to say this does not answer so well, but at a busy season all makeshifts have to be made use of, and the above taken as a whole is a recommendable one.—JOHN ROBSON.

NOTES AND GLEANINGS.

WE have received from the Hon. and Rev. J. T. Boscawen specimens of PARSONS' WHITE MIGNONETTE, which for length of spike, size and whiteness of the flowers, and delightful fragrance, exceeds anything in the way of Giant Mignonette we have ever seen. Its scent is not unlike that of Gardenia fragrans, and is quite as powerful. It is an invaluable strain, worthy of careful preservation.

—— MR. CANNELL of Woolwich has sent us flowers of the PELARGONIUM OBLONGATUM, a species with yellow flowers, which he has been distributing among hybridists for the purpose of producing a new race of Pelargoniums with yellow flowers. We hope to hear that the attempt has been successful.

—— THE superficial surface of the FLOOR of the Great Hall at Antwerp, in which the Flower Show was recently held, is 1763 yards. That of the galleries 599, making in all 2362 square yards, or nearly half an acre, under one roof. This information, which we could not get at the time of the exhibition, has been kindly sent us by Mr. Charles Gilbert.

—— THE Governor of the Bahamas reports that the CULTIVATION OF THE PINE APPLE is rapidly spreading through those islands. He saw last year what is probably the largest field of Pine Apples in the world. It is on the estate of Mr. Johnson, in the eastern district of New Providence, and from one spot could be seen at a single glance 1,200,000 Pine Apples growing. They were well weeded and in good order; and this broad expanse of young fruit, in its clusters of delicately-tinted but sharp and distinct leaves, gave a peculiar feature to the landscape. The Governor states that Pine Apples to the value of £53,497 were shipped from the Bahamas in 1873 to the United States and England. The inferiority of the Bahamas Pine Apples hawked about the streets of London to the hothouse Pine Apples of England is due to the necessity of cutting them unripe, that they may outlive the voyage.

GALEANDRA BAUERI.

THE Galeandras have had their generic name translated "Casquewort," because their flowers are shaped like a helmet or casque. Dr. Lindley mentions the species now before us as "Bauer's Casquewort." The specific name commemorates Mr. Francis Bauer, the botanical portrait-painter.

This Orchid was first discovered by Martin in French Guiana, but the first living specimen was sent to Mr. Barker from

Mexico by his collector Mr. Ross, who stated that he found it "at a place called Kisatipa, ten leagues from Melacatapec, and growing at the upper end of a dry ravine, terminating half way up the mountains, in a south-west aspect. The temperature varying from 69° to 77° Fahr. by day, and at night as low as 59°. The mountain surrounding this ravine, that is on the north-east side, is covered with a great variety of Orchideæ, whilst on the south side of the ravine there are none to be

Fig. 78.—Galeandra baueri.

found but a few Tillandsias. On the top of the mountain there is a continual mist all the year, from December to February excepted. The atmosphere is particularly moist and warm."

Although there are but few species belonging to this genus, and those few are but little known except in large collections, nevertheless the flowers of all of them are very pretty. G. Baueri is perhaps the most desirable. The prevailing colour of the flowers are pink. The whole plant is dwarf, not growing more than about 6 or 8 inches high. It may be cultivated in a pot or on a block, as shown in the illustration. The main obstacle in growing such difficult plants on blocks is that they are so apt to receive a check when making their growth if allowed to become too dry. If the plant is fastened to a

block it is necessary to place some sphagnum on first, and then fasten the sphagnum and the plant to the block with copper wire. If grown in a pot it ought to be quite three parts filled with drainage, and the compost should be sphagnum, turfy peat, and broken pots in equal proportions. When the young growths are being made the plant ought to be shaded from the sun and kept in a temperature of 65° at night. The leaves are easily injured, and must be kept free from insect pests at all times; but thrips and red spider must be carefully guarded against when the plant is making its growth.—J. Douglas.

SALVIA PATENS.

Both as a pot plant and as a border flower this well-known Salvia unquestionably possesses high merit. Twenty years ago it was more commonly met with than at the present day, yet in beauty it is not superseded by any other species of the same genus, or surpassed in colour by any flower that is grown in hothouse or garden.

As a conservatory plant it is deserving of more general attention than it receives, as contributing a colour that is not common to indoor plants, and which is fine by contrast with other flowers of the same period, and, more than this, one that is certain to be admired for its intrinsic richness and undoubted beauty.

The plant is of the easiest possible culture. It may be had in bloom over a long period of the year, and may be grown and flowered small in a 48-sized pot, or be increased to the size of a large bush carrying twenty or more spikes of bloom. It is thus adaptable to small or large houses, and to various purposes of decoration. It is a plant which, with gentle forcing, will fill an important place after the Cinerarias are over, and provide the colour which those plants have, in a measure, been wont to give, and which is too often absent in Pelargonium, Calceolaria, and Azalea time. For associating with those plants in June the Salvia patens is extremely well adapted, and cannot be too strongly recommended.

For this purpose stools, established in pots, have only to be introduced into gentle heat in February, and be placed in a light position, and by shifting-on they can be grown to any size required. If small blooming plants are preferred the young shoots can be struck in a brisk heat, when, by liberal culture and without any pinching or stopping, they will be in bloom in two or three months from the time of inserting the cuttings. Rich soil with an abundance of water are the main points leading to success. It should be stated that on breaking into growth the old plants should be carefully shaken-out of the pots and be repotted in fresh soil. When full of roots and in active growth they will require as much support as the Chrysanthemum. If this is denied them they will not only cease blooming, but will become infested by the red spider. As summer and autumn-blooming garden plants, rows, clumps, or individual plants in the mixed borders are very effective.

How much this plant delights in moisture was evidenced by the wet season of 1872, when it flowered uninterruptedly from July until destroyed by frost. Spring-struck cuttings of that year grew into plants of immense size, and bloomed profusely during the dripping period of that summer.

If required in a dwarf state the plants can be pegged down, but they are not suitable for filling-in a panel—not only because the growth is not close, but because during very hot weather, when other plants are in beauty, these are apt to drop their flowers, and would spoil the aggregate effect. It is for the conservatory, for lines in shrubberies, or clumps in mixed borders, that these plants are mainly suitable, and for such purposes they should be universally cultivated.

Their rich spikes are always in request as cut blooms, and they last a considerable time—in fact quite long enough—in water. For this purpose alone this beautifully blue Salvia should be provided. A lady armed with scissors and basket in seeking to decorate her apartments will never pass by this plant without a supply of its free yet imposing spikes of bloom.

A stock of this plant is easy to be had, for cuttings strike quite freely at this season, and it is also easily raised from seed. It is not a free-seeding plant, and not many can be expected from a small packet. What there are, however, are pretty certain in germination if afforded a genial heat and a sufficiency of moisture. Plants from seed flower the same season.

Its tuberous roots will, in dry soil, and if covered with ashes, survive the winter in the open ground; but it is altogether preferable to take them up and store in pots or boxes quite free from frost. The soil should never become dust-dry, or the roots will shrivel at the neck and the eyes will refuse to start in spring. This good old plant is commended to gardeners generally, and to admirers of blue flowers particularly, as worthy of extended cultivation.—A Surrey Gardener.

NOTES ON VILLA AND SUBURBAN GARDENING.

The Flower Garden.—Much activity will be needed in this department from now up to the time of bedding-out, not so much from this branch alone, but while this is going on other things must be thought of to produce a display of bloom after other plants are out; however, by dividing the subject, and beginning with the outdoor part, I may be better understood.

Dahlias.—If these have not yet been started into growth under glass, it would not be a bad plan to plant them out now where they are to flower. I have done so about this time for two seasons, not having room to do otherwise, and they have done well. Of course the ground must be well prepared and deeply cultivated for them, and well drained, so that the water, of which they require an abundance, may pass off quickly. A sheltered situation is the most suitable, on account of the brittleness of the wood and heavy foliage. In order to develope themselves they should not be less than 4 feet apart, and when planting cover the roots with a coating of coarse sand; but first add lime to the soil, in order to check the attacks of slugs when the young shoots begin to show. After planting, a covering of rough litter over a coating of coal ashes will protect them from frost; but when the shoots come above ground allow them full liberty in the daytime, but cover up at night until all danger from frost is over. Staking and tying will be a necessary operation in due time.

Gladiolus.—The principal lot of these must now be planted. The treatment as to soil is about the same as for the Dahlia, excepting that it should be fresh and not over-rich. The common or hardier sorts, such as Brenchleyensis, are not so particular as to soil-preparation as the newer and more tender varieties.

Carnations.—It is quite time that all those not intended for pot culture, and which have been kept in pots in cold frames all the winter, should be planted-out where they are to flower, and the others shifted into pots a size larger; or, if that has been done some time, the earth will need a little renewing. Picotees and Pinks must now be planted-out in the same manner, as well as most other perennial flowering plants, such as Sweet Williams, Lychnises, Campanulas, Columbines, Feverfew, Foxgloves, Hollyhocks, Canterbury Bells, Pansies, Sweet Rockets, Rose Campion; while other plants, such as Polyanthuses, Primroses, double Daisies, Thrift, Hepaticas, Saxifrages, and Gentianellas, ought to have been planted early in the autumn, as they are now at their flowering time.

After the above work is done, and in order to advance matters, all the flower beds that are to have raised edgings—as is the custom now in both small and large gardens, and which look uncommonly neat—if the plants to be used are either hardy or half-hardy they may now be planted. I allude to such plants as Echeveria californica, Echeveria secunda glauca, Gnaphalium lanatum, and plants of that type, which make suitable edgings, and will take no harm if put out now; and as the operation disarranges the beds, these can after this be the better prepared for the more tender plants to be planted hereafter.

The Indoor Department.—Here there is much to be done. The work of propagating, where the stock is yet short, must be carried on vigorously. The last of all to be propagated are the Alternantheras, Coleus, &c., because they from their tender nature cannot be trusted outdoors so soon as other plants—possibly not till the beginning or middle of June. If a quantity of these are required it will save time if they are put thickly into boxes instead of pots, and they will come out just as well at bedding time, Coleus excepted; these producing larger foliage, are more tender, and not quite so vigorous in rooting, will do best if each plant can have a pot to itself. Keep these and all other bedding plants stopped, so that they may make the better plants and cover more ground when planted-out. Pot-off or prick-out Amaranthuses, Stocks, Asters, Indian Pinks, Chilian Beet, Ricinus of sorts as they require it, and have all the bedding stuff into a settled condition as fast as possible, so that when another week or two has passed away all may be placed under temporary protection outdoors, and in a short time be finally hardened-off preparatory to being planted-out; this will leave room for such plants as ought to be seen to now in order to fill-up the vacant places.

The first of these is the Primula sinensis. Sow seed of the white and red separately in pans or pots half filled with drainage, the remainder finely-sifted peat and leaf mould half and half, with sufficient sand to keep it from binding. Do not fill nearer than within half an inch of the top of the pot; cover the seed thinly and water gently; cover the whole over with damp moss to prevent the soil drying too suddenly, which, as I have said before, after they have vegetated is very hurtful to them or all small seeds; place them in a Cucumber frame or where

there is a moist heat, and they will not be long in coming up. The moss must be taken off, and great care exercised in this young state. The sun is liable to scorch them off, therefore gentle shade is necessary until they are established in pots to themselves.

Those who grow Cockscombs will have a grand display in August by sowing the seed now, and raising the plants in a dung frame; sown in a similar manner to the preceding plant, but the soil may be a rich loam and not peat, and after this they need a strong heat to bring them to perfection, including a gentle bottom heat. It is a beautiful and lasting flower of easy culture, and I am afraid it is becoming neglected, hence my reason for calling attention to it. Balsams should also be sown now in pots of similar soil to the Cockscomb, and be grown on as fast as possible in a frame and kept near the glass to prevent drawing; but although these will thrive in a pit, they will take up much more room, and they also like a circulation of air amongst the pots as well as the branches when they have become established; if they are grown in a dung frame throughout, which is a very convenient way for those with small convenience, the frame must be set on bricks and elevated at the back to have the benefit of sun and light, and let the air circulate underneath the frame.

Gesneras and Achimenes.—These are very essential for late flowering, and the last of them should now be potted in light soil, shaking the old soil from the tubers and picking out the best for potting, setting several into the pot according to its size, and covering them over lightly, and start in the gentle heat of a frame or house. After the foliage is made keep the moisture from them while the sun shines, or take means to shade them, or the leaves soon become spotted and look bad. Some of the tall-growing sorts may require stopping in order to secure side shoots and dwarfness. This operation will necessitate their being kept in a growing atmosphere after the others have advanced more towards flowering.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

HARDY FRUIT GARDEN.

Casual allusion was made two weeks ago to protecting the blossoms of fruit trees from frosts. The fine weather we were enjoying at that time has been succeeded as usual by east winds and a much lower temperature. On Wednesday the 14th Fahrenheit's thermometer registered 5° of frost. Many of the standard Plums are in blossom; Plums, Cherries, and Pears on the walls are also either in full flower or are well advanced to that point. Now as to the means used to protect from frost. The trees are simply allowed to take their chance this year. When the weather is dry and the air still a few degrees of frost does little damage to the blossoms. The main object of placing screens over the trees is to keep the blossoms dry. A coping projecting from the wall 9 inches or a foot will do this to a certain extent, but it will not save the trees from driving rain, sleet, or snow. The canvas, as has been already suggested, must be arranged so that it does not touch the blossoms. Placing spruce branches amongst the blossoms has been recommended for wall trees and for small or medium-sized specimens in the open garden. They may do a little towards sheltering the flowers in a calm night, but even with a very moderate gale of wind they would be blown about amongst the blossoms, so that they would be very materially damaged. As to the trees in the open ground, unless they are small bushes or pyramids but little can be done to them to be effectual: if canvas is put over them it must be removed during the day. A few years ago we had a framework made and put over some of the choicest Pear trees; a canvas screen was made to pull over this and to fit tightly, and was allowed to remain over the trees from the time the first blossoms opened until the fruit was set. It was found on comparison that the trees uncovered were healthiest, and also that the fruit set best on the uncovered trees. Shading too closely predisposes the trees to the attacks of insect pests.

The operation of grafting should now be performed, Pears on the Pear stock, and Apples on any stock—Crab, Paradise, Doucin, &c. The grafts were saved at the time of pruning and stuck into the ground at the bottom of the trees. They are now starting into growth, but not so much as the trees to be operated upon. The methods of grafting described in horticultural works are very numerous, but two—viz., crown and whip grafting, are quite sufficient for all the purposes of the ordinary gardener. If it is necessary to head-down an undesirable variety of Apple or Pear the large branches must be crown-grafted. From two to four grafts may be inserted on each crown, and the *modus operandi* is very simple. Slits corresponding to the number of grafts to be inserted are made in the bark from where the branch was severed. The scions are prepared very much the same as for whip-grafting, and pushed down at the slit between the bark and the wood. Whip-grafting is adopted when the wood to be operated upon is the same or nearly the same thickness as the graft. It is only necessary that the bark of the scion and stock come in contact at one side; if it meets at both sides all the better. The scion is cut in a slanting direction, the cut to be about 2½ inches long, and a corresponding cut is made on the stock. The work ought to be done with a sharp knife, as the cleaner the cut is the better will be the union. It is also usual to make notches to correspond on stock and scion; but this is not necessary, as, if the work is well performed, the joining is so perfect that the wind will not break the tree over at the union.

FRUIT AND FORCING HOUSES.

Vineries.—The earliest house now receives more ventilation and less moisture in the atmosphere, as the fruit is colouring. The surface of the borders and paths are sprinkled with water daily, generally in the early part of the day. Were the days warmer more moisture would be applied. It is not possible to say how much moisture should be evaporated from the surface of paths, borders, &c., as the quantity required in a day of bright sunshine with a drying east wind is out of all proportion to the requirements of the house when the weather outside is of the opposite character. The borders outside (protected by waterproof shutters) and inside received a good watering with manure water. We calculate to give as much water at each watering as would correspond to a rainfall of 2 inches.

Guano of the best quality is a good stimulant for Vine borders; it is merely sprinkled over the surface before commencing to water, and the large quantity of water applied will carry the stimulant to a considerable depth. It is yet too early to remove all the covering from the outer border, but all the manure has been removed, except so much as covers the surface to the depth of about 3 inches. The shutters are still retained; in the daytime it would be as well to remove them, if they could be replaced again at night, but this makes too much extra work for us.

Examine all the laterals to see that they are firmly fastened to the wires, as the weight of the bunches not unfrequently break a weak fastening, and on one occasion we found a fine bunch of Muscats nearly ripe lying on the ground from this happening. Our lively little friend the red spider has appeared; it can be destroyed by painting the hot-water pipes with flowers of sulphur, soot, and a little soft soap; but great watchfulness is necessary, or the fruit may be injured. We generally make an attempt to wash the leaves by hand with a sponge and soapy water, but this is tedious work, and requires as much care as the other, as a careless person makes a sad mess of the bloom on the Grapes with his coat sleeves or by bobbing his head or hat against the bunches, or if he does not first wring the water out of the sponge mayhap the dirty soapy water is allowed to drip on the berries.

Late houses are now demanding all our attention in tying and training the growths. The instructions how to do this was fully described when the earlier houses were done. The inside borders have received two waterings with clear water; rain water is undoubtedly best, but owing to the deficient rainfall of the last two months we have had already to draw upon the pump for a supply.

If it is intended to inarch any of the Vines with another variety now is the time to look out for a suitable growth. It ought to be trained into the place where the new sort will occupy, and it must not be stopped at the same time that the side growths are. The intended variety may be grown on either in the same or in another house, and when both young rods are from 5 to 6 feet in length they may be joined together by slicing a portion about 4 inches long from each, fit them neatly together, and tie tightly with matting. In two weeks the fastening must be slackened, as the Vines grow rapidly. When the union has taken place the plant inarched from may be partially severed from the Vine close to the union, and in two or three weeks more it may be cut off.

As the weather is very changeable, much attention is required in airing and maintaining the proper degree of moisture.

Peach Houses.—In the earliest houses where the fruit is stoned and taking the second swelling a high temperature may be kept up with a corresponding amount of moisture in the house. Syringe the trees morning and afternoon, and if there is any traces of red spider the water must be applied with considerable force. The water should be exposed to the atmosphere of the house a few hours before using it. The best way is always to keep a pot or two filled; they may stand upon the hot-water pipes. The roots should have a good watering also at this time, and probably no more will be required until the fruit is gathered, when the border may have a good watering, and the leaves be thoroughly washed with the garden engine or syringe. When the fruit shows signs of ripening cease to syringe, and give more air, and reduce the night temperature to 60° or less, it may be 70° at the time the fruit is swelling.

GREENHOUSE AND CONSERVATORY.

Chrysanthemums now require considerable attention. Plants intended for specimens are now being potted and trained; it is necessary that they receive no check to their growth through becoming pot-bound, and the young shoots must be bent down

before they become too stiff. Plants grown to produce large flowers are not stopped at all, but the shoot is trained to a single stick. This plant is subject to the attacks of aphis, and this pest must be effectually destroyed before the plants are placed out of doors.

Lapageria rosea and L. alba are now making the young growths. These must not be allowed to twine together and round the wires, but must be untwined when they do so, and be merely tied to the wires. Knitting cotton is excellent for the young shoots to twine round, as if at any time it is necessary to remove or re-arrange the growth the cotton may be cut. Hyacinths and Tulips are now nearly over, but their place is well supplied by Cyclamens, Primula amœna, and varieties of it, the most distinct being the white and lilac sorts. Cinerarias are also indispensable at this time, the flowers lasting so very long in beauty, and are so well adapted for cutting from. In hot drying days sprinkle the paths of the houses with water in the forenoon.—J. Douglas.

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Manchester (National Auricula Show).—April 27th.
Jersey.—May 5th, Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.
Bath.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.
Blackburn.—May 17th, 18th, and 19th. Mr. W. Ditchfield, Hon. Sec.
Crystal Palace Company.—Flower Show, May 29th; Rose Show, June 19th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.
Coventry.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.
Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.
Burton-upon-Trent.—June 16th. Mr. Wm. Shave, Bond Street, Sec.
Glasgow.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
Fareham.—June 23rd. Mr. H. Smith, Sec.
Exeter (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.
Wisbeach.—June 30th. Mr. C. Parker, Hon. Sec.
Maidstone.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Address (*J. Porter*).—We do not know to whom you refer.

Pansy (*H. W. M.*).—The colour of your Pansy, a reddish bronze, is not common, neither is it new. It is a little deeper than that of the variety called Annie. As the flower is of good form we advise you to preserve the plant as a parent for further improvement in rich colours.

Geranium Lucius.—"*C. R.*" asks, "Will 'Age' inform me where one can obtain in perfection plants or rooted cuttings of the Geranium Lucius he so strongly recommends in the *Journal of Horticulture?*"

Greenhouse (*N. P.*).—We cannot recommend. As you quote from Messrs. Boulton & Paul's catalogue, why not write to them? You ought to be able to decide for yourself from their well-illustrated catalogue.

Chicken Manure (*A. S.*).—You cannot do better than offer it to some market gardener or nurseryman near you.

Meadow Saffron in Pasture (*F. W. H.*).—The specimen you enclosed is the Meadow Saffron, Colchicum autumnale. Many cows have been killed by eating the leaves. The only effectual and cheap mode of destroying it is to employ some women to cut every plant down to the bulbs. Spuds and old knives may be used for the operation.

Destroying Insects (*R. T. F.*).—Any one of the preparations advertised answer the purpose. We cannot insert testimonials, for if we did so for one, others would claim that cheap mode of advertising.

Aughinburgh Blackberry (*J. H. W.*).—Some nurseryman at St. Francisco, California, could supply it probably, but we know of none.

Vines and Peaches Injured (*A. B. C.*).—There is not a doubt but the overheating would act injuriously upon both Vines and Peaches, but we are not prepared to say a morning temperature of 70° a week before the Vines flowered would so dry the atmosphere as to scorch the leaves, but we incline to the opinion that the pipes or flues have been so highly heated as to cause injurious fumes to be given off, and these would account for the condition of the leaf sent us. Scorched it is by some agency, it may be the overheating, an overdose of tobacco smoke, or the sun falling powerfully upon the leaves while wet. A temperature of 65° in the morning is 25° too high for Peaches in flower, and would be highly injurious to their setting, though we do not consider we should be justified in attributing the cause of the poor crop to it alone, as we know many instances of such mishaps in overheating occurring without being attended with such disastrous consequences as those you describe. The after-effects upon the Vines and Peach trees will not be permanent.

Melons and Cucumbers in a Small House (*An Amateur*).—Your small house will answer from May onward for either Cucumbers or Melons, the plants being forwarded in a bed, and strong before placing in the house. They may be grown in either pots or boxes, and the shoots be trained about a foot from the glass. Telegraph Cucumber would answer admirably for the house. Little Heath Melon would succeed well in a frame with fermenting materials, or it would do in the house, though Cucumbers and Melons are best grown separately.

Vines in Cool Vinery (*Idem*).—The Vines may be syringed in the evening, but we do not recommend the practice except when the Vines are breaking, discontinuing it so soon as they are in leaf. The floors, walls, and every available surface we should sprinkle with water at between 7 and 8 A.M. and at 5 P.M., damping the floor, &c., at noon in bright weather in addition to morning and evening, which is a better means of supplying moisture than by directly forcing it upon the foliage, and especially their under surface, by syringing. The Vines not having been pruned we should disbud so as to leave two buds or shoots from the base of each growth of last year if upon the spur system, or if rods, leave the shoots on opposite sides of the cane at 12 inches distance apart. We should have a thermometer in the house about its centre, and with its back to the sun. Give a little ventilation at 65° to allow of any accumulated moisture being dissipated, and allow the temperature to rise to 75° before increasing the air, and then admit it rather freely, not allowing it to fall below 75°, and with full air the temperature may rise to 80° or 85°, and in summer to 90° without injury, reducing the ventilation as the temperature decreases, and altogether by the time it declines to 75°, and if it rise to 80° after closing no harm will be done. If mildew appear dust the infested parts with flowers of sulphur. We could not give you the full treatment of the Vines; that you may learn from the "Vine Manual," published at our office, and to be had therefrom by post if you enclose 2*s.* 7½*d.* with your address.

Greenhouse Flue Heating (*B. B.*).—Your house may be heated satisfactorily by flues but not by one furnace, as it will require to be too highly heated, and at the furnace would be red hot, whilst the other end of the flue would be comparatively cool. To heat safely you would require two furnaces, and in this case it would be more costly than heating by hot water, which we advise. Two 4-inch pipes along the front at about 3 feet from the front wall and on the level would be sufficient in the severest weather to exclude frost. The front wall of the greenhouse we should have 2 feet above ground, then 3 feet of front lights, and the back wall will need to be 13 feet 6 inches high. The trellis for the Vines should be fixed 16 inches distance from the glass.

Grafting Vines (*Idem*).—Black Hamburgh may be grafted upon Buckland Sweetwater, and now is a good time to do it, the scions being in a dormant state. Both, however, succeed so well upon their own roots, that, except for changing kinds, the working of them is undesirable.

Asplenium Fronds Eaten and Browned (*F. W.*).—The most likely cause of the damage to the fronds is by snails or slugs, woodlice being also addicted to eat them. Examine the plants at night with a lantern, when you will probably find the depredators on or near the plants. The brownness we presume is that of the old fronds, which is usual at this time of year, they being soon after this replaced by new growth.

Camellias not Flowering (*Idem*).—The cause of the plants not flowering, or not forming buds, is due to over-vigour; but buds may be formed, and they may be cast, which is mostly a result of weakness and imperfect root action.

Sowing Aucuba Berries (*J. J. S.*).—You may sow the seed or berries without removing the skin and pulp surrounding the seed; but we think it just as well to remove it, and sow in rich light soil, and place in gentle heat; in about six weeks or earlier the seeds will be up, though we have known them not to germinate until the times you quote. In answer to the correspondents to whom you allude, the vagary is not ours; it is that of the seeds themselves. The uncertainty of growth is common to many seeds, as Palms, Roses, Hollies, Thorns, &c.; even the Primula japonica we have had up in little more than a week after sowing, and at another time the plants have not appeared under twelve months.

Lawn Sand (*C. A. J.*).—Write to the proprietor, who advertises in our columns.

Seakale (*Chippenham*).—Plant at once young roots, not more than one year old, but if convenient leave the old roots for another year, and after cutting throw them away. You will then have a vigorous young plantation to give a full supply for many years. Seed sown now in rich soil, breaking the outer shell of the seeds, will in two years give an abundance of fine crowns for regular forcing.

List of Orchids (*F. L.*).—About seven of the species named may be depended upon to flower between the 1st of November and the first day of April. Fourteen are what are termed cool-house Orchids, the remaining twelve being adapted for the intermediate house. The cool house ought to have an average minimum temperature of 45° during winter, the intermediate house an average of 55°. None of them will succeed in a cool greenhouse. The ordinary occupants of a greenhouse require more air and a much drier atmosphere than is necessary for Orchids. We advise you to build a small house specially adapted for cool Orchids. Unless you do this your success will be more than doubtful. The plants are cheap enough if they are healthy, but we would not purchase an Orchid unless we first saw the plant. We also think it right to inform you that the best cool-house Orchids are omitted in the list, such as Cattleya Skinneri and C. crispa, Epidendrum aurantiacum and E. prismatocarpum, Lælia autumnalis, L. majalis, and L. superbiens; Lycaste Skinneri, and the many fine varieties of this useful Orchid; Masdevallia Harryana which is now cheap; Odontoglossum crispum in variety (this is the best cool-house Orchid, indeed it is the most useful of all Orchids); O. triumphans, O. Insleayi and varieties—this is a fine winter-flowering species, as is also O. nebulosum; Oncidiums such as O. bifolium majus, O. hastatum, O. macranthum, O. nubigenum, O. Phalænopsis, and O. tigrinum. All the Pleiones are winter-flowering and adapted for a cool house. Sophronites grandiflora and Stanhopea tigrina are also suitable. We advise you to purchase good plants, they are cheapest in the end. The best dwarf tree Carnation is Miss Jolliffe. Picturata is also dwarf and very pretty. You ought to have the Scarlet Pink "coccinea."

Beginning Gardening (*T. M. B.*).—You seek for information too extensive

to answer in our columns. Our "Garden Manual" contains all that you ask for and much more. You can have it free by post if you enclose twenty postage stamps with your address. Your poultry query will be answered next week.

Snowdrops, &c. (*O. W. D.*).—We cannot state the addresses. It is most annoying to amateurs to have to answer applications of the kind you intimate.

Waxen Daffodil (*R. S. S.*).—The specimen you enclosed under this name is, we think, the Musk Narcissus, Narcissus moschatus. It is figured in the "Botanical Magazine," t. 924.

Pyrus (Cydonia) japonica and Sweet Bay Propagation (*S. B.*).—The former may be increased by cuttings of young well-ripened wood put-in in October after the manner of Rose cuttings—*i.e.*, having one or two eyes above, and 8 or 9 inches within the ground. They are a long time in rooting, often more than twelve months. Layering in the autumn is a more certain mode of increase. Sweet Bay is increased by cuttings put in under handlights at the end of September, securing a heel of old wood at the base of each cutting. The cuttings of both should be put-in firmly in gritty soil.

Wild Primrose (*J. Rogers*).—The flower you have sent is a case of duplication in the Primrose, wherein there are two pistils, double the usual number of stamens and segments of the corolla. We fear it is not likely to be permanent, and we suspect all the flowers on the plant are not of a similar character. If they are it will be an interesting variety.

Insects Attacking Pot Vines (*An Old Subscriber*).—The white grubs which are attacking and destroying your pot Vines are the larvæ of the voracious weevil, Otiorhynchus sulcatus. As they are easily seen and do not bury themselves deep in the earth, they may be found by a careful removal or sifting of the soil round the crown of the roots of the plants. This should be burnt or well soaked with gas-tar water. The brown beetles which are the perfect state of these grubs are much more difficult to discover, but may be caught by laying a sheet round the stems, and visiting them with a light after dark, when they are alarmed and fall to the ground.—I. O. W.

Names of Plants (*T. W. C.*).—Justicia carnea, Flesh-coloured Justicia. It requires stove culture, being a native of Rio Janeiro, whence, in 1827, it was sent to the Royal Horticultural Society. (*I. W.*).—The tree is the common Alder, Alnus glutinosa. (*Conc*).—The large-coned specimen is Picea Nordmanniana. The other we do not recognise.

POULTRY, BEE, AND PIGEON CHRONICLE.

HOW TO BUILD A PAIR OF FOWL HOUSES.

I send a general description with a few plain directions, "how to build a pair of semi-detached fowl houses." The accompanying plan and elevation are on one-eighth of an inch scale.

The fowl house is situated in an orchard facing the south, the run of one measures 130 feet by 40 feet, the other 260 feet by 40 feet, part of the distance being 80 feet wide at the end surrounded by a wire fencing, except the outer side which is a wooden fence 8 feet high. The fowl house is 24 feet wide, 6 feet deep, 6 feet from ground to eaves, and 8 feet to ridge of roof inside at each end of the building, and under the same roof there is an open shed 5 feet 9 inches square (inside measurement), the remaining 12 feet are the two fowl houses divided in the centre. A door leads into each compartment, approached through the open shed with a hole in the door for the fowls to pass through, as seen by the elevation. The laying nests are upon the floor with perches so arranged as not to be any annoyance to the fowls' nests. The floors of fowl house and sheds are laid with 4 inches of broken chalk and sifted cinder ashes mixed together, well rolled and beaten down, then copiously watered with a garden water can, making when dry a firm and capital floor. A dust bath is also provided in each of the open sheds.

The outer walls of the house are built with feather-edged 9-inch deal boards, overlapping each other 1 inch, also the two ends of each fowl house up to the doors. The inside of fowl houses are lined with three-quarter-inch white 9-inch deal boards. The doors are 2 feet 3 inches wide, and 5 feet 9 inches high. The window is glazed and fixed to give light to both houses. The roof thatched with wheat straw of good thickness, and overlapping the outer walls about 9 to 12 inches.

I very much prefer straw thatch to any other kind of covering for the roof, ensuring an equable temperature summer and winter. The arrangement of the double walls in the two houses ensures a capital ventilation, the chalk floor adds greatly to the comfort and health of the fowls.

Having given a general description of the houses I will as clearly as I can state a few plain directions how I set about building them. I must presume my reader has decided to be his own architect, surveyor, and builder. Let us now take a walk to the timber merchant, and let him understand we are to be put on the best terms for cash payment, the order will be as follows:—

	£	s.	d.
9 by 12 feet deals, 4 cut feather-edged	1	16	0
6 by 12 feet white deals, 4 cut plain boards	1	4	0
50 feet 4½ by 3 five supports for top of roof, marked E, 10 feet each	0	8	6
105 feet 4½ by 3 for posts to support the walls and eaves of roof	0	17	6
24 by 5 feet, 2½ by 1½ for the rafters	0	9	0
2 by 12 feet, 3 by 1½, for top of roof fixed on the 5 by 8 feet posts	0	1	6
4 by 12 feet, 3 by 2½, for top of front and back posts	0	4	0
	£5	0	6
Nails, hinges, locks, glazed second hand window, chalk, straw, and thatcher	2	0	0
	£7	0	6

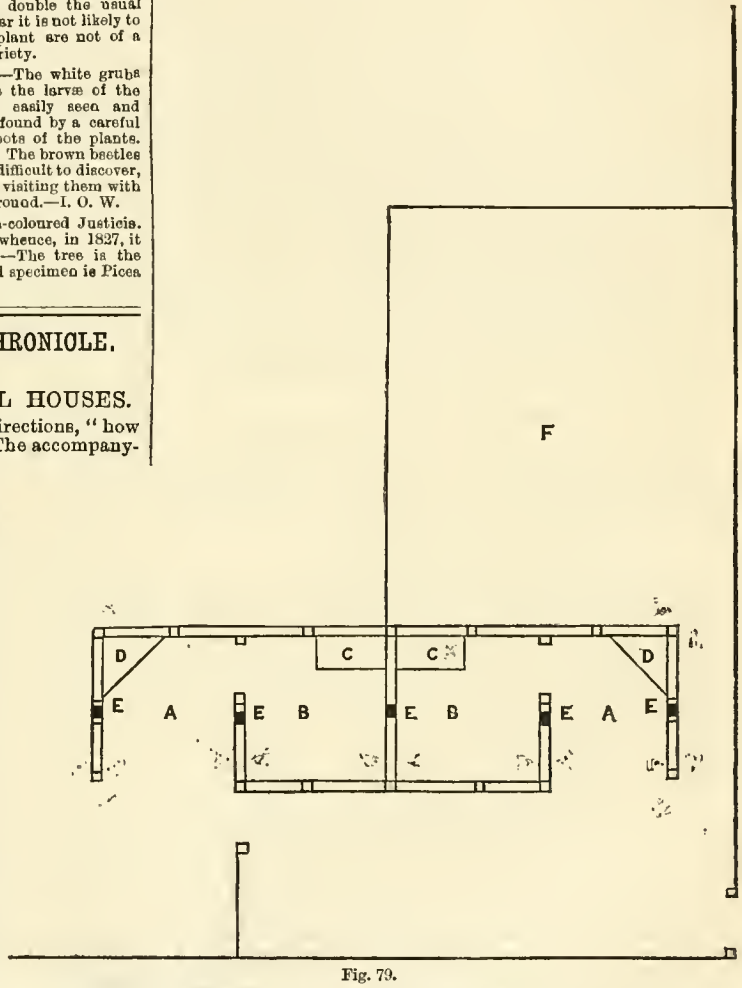


Fig. 79.

A. Sheds open to the south.
B. Fowl houses 5 feet 9 inches square.
C. Nests upon the floor.
D. Dust baths.
E. Centre posts.
F. Run enclosed with wire netting.
□ Gate.

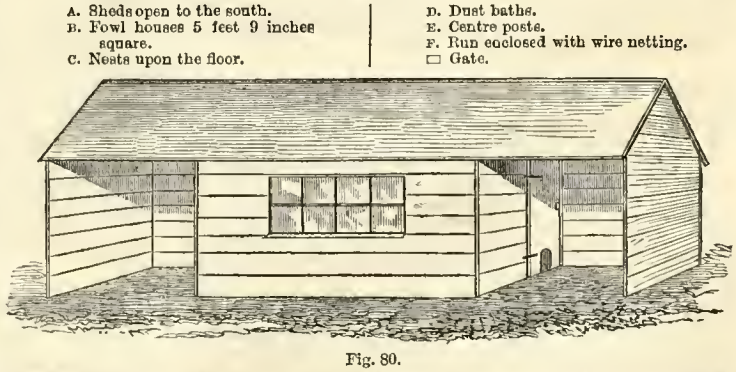


Fig. 80.

The above goods, &c., having been sent in I must refer to ground plan (fig. 79), which shows there are fourteen posts to support

eaves of the roof and the walls of the building, divided by 14 gives 7½ feet to each post, the holes to receive them to be dug 18 inches deep. Be as careful as possible in fixing the four corner posts that they are perfectly accurate, then proceed to dig the holes the same depth to receive the remaining ten posts.

Having fixed the posts for the outer walls then proceed to dig five holes 2 feet deep, for the five centre 10 feet posts marked E, leaving 8 feet above the ground to support the top of roof; when securely done take two 12 feet, 3 by 1½, and let them in at the top of the five centre posts. Proceed next to fix 2 12 feet, 3 by 2½ at the top of the front posts, Nos. 1, 14, 13, 12, and 11, and 2 12 feet, 3 by 2½ on the top of back post, Nos. 2, 3, 4, 5, 6, 7, 8, 9, and 10. All is now ready for the rafters, 24 by 5 feet, 2½ by 1½, half in front half at the back.

The skeleton of the building is now ready. Begin next with fixing the feather-edge boards, 9 by 4 cut deals gives five boards to a deal, or forty-five boards 12 feet long, 9 inches wide, allow 1 inch for overlapping, takes nine boards all round, rather more for the gable ends, 12 feet boards is a convenient size, cut them in half they fit the two ends, and cut a board in three will be rather more than enough for the two ends of the fowl house. Under the shed allow 2 feet 3 inches for doors. Next proceed with fixing the glazed window 4 feet by 3, or any other convenient size and pass to the inside of the house; first fix a double lining of boards for the centre to divide the two houses, and then line the inside back, front, and gable end walls, use the wood for the purpose from the 6 by 12 feet white deals, four cut plain boards, you can make your doors from the same, and fix them with ordinary hinges and locks. Place your perches in such a position as shall be for the comfort of the birds, so as not to interfere with the nests upon the floor, place the dust bath under the shed in the corner opposite the doors. Everything is now ready for the thatcher. Make a bargain with him at so much per 100 square, and use the best wheat straw. For the outer wall of house I have found pine varnish a cheap and excellent substitute for paint. Paint or tar is very objectionable for fowl houses. The cost will be 2*s*. 6*d*. or 3*s*.—J. P. Miller, *Enfield*.

SIZE AND TREATMENT OF BANTAMS.

In rearing these interesting pets the chief aim is to maintain the diminutive character or to reduce the size, if possible, as they seem to possess a natural tendency, under ordinary treatment, to exceed their parents in proportions, which they generally do, unless prevented by scientific means.

The prevailing idea is to accomplish this by late hatching, which has the effect intended in some cases, marred perhaps by preventing at the same time the complete growth of the late tail feathers, which will be considered a defect in the show pen; so that this plan of depending on the effects of cold weather to stop the growth may be considered as only partially successful. Another process for accomplishing this object is to diminish both the quantity and quality of food, which seems readily to occur to amateurs; but as some varieties of the Bantam class are somewhat delicate, the partial starvation process has the effect of either causing them to become still more so, or of eventually killing them. They really require a stimulating and nourishing diet, selected with a view of rejecting the bone-forming ingredients. The first soft food for tender young chicks should be bread crumbs scalded with milk, and then squeezed nearly dry, so as to readily scatter in fine bits, for which the birds have a decided relish, not forgetting to mix with this food a little pepper for the weakly birds, especially during cold and stormy weather. To follow this feed, say after they are four or five days old, we would recommend well-boiled rice, salted to taste; when nearly cold incorporate it with sufficient coarse ground barleymeal, and occasionally a very little oatmeal, to form into crumbs or pellets, which may be fed without waste, a little at a time, and as often as relished; which, with the addition of other food which does not make bone rapidly, will carry them through either early or late seasons most successfully and humanely.—(*American Fanciers' Journal*.)

GREAT HARWOOD SHOW OF POULTRY, &c.

The Show of the Great Harwood Agricultural Society was held on the 15th inst., being somewhat earlier than in some previous years. The entries for poultry were not large, but many of the classes contained good specimens. Single *Game* cocks were poor, but the class for pairs made amends, the first-prize pair being about the most stylish pair of chickens we remember to have noticed last season, as also in head and colour properties. The second were adult birds, the hen a gem, cock good in colour, but not in good order, and without one sickle feather. Highly-commended pen good in all points but the cock's breast, which was too red. Gold-pencilled *Hamburghs* good; the first-prize pen about perfect, as also the Silvers. The Gold-spangles very good, notably the first-prize hen, which is about the best we ever saw. Silver-spangles were a good even lot, and all noticed. In *Cochins* all were poor except the winners, which were Partridge. *Dorkings* had, but *Spanish* good, the hens especially, although the first-prize cock was a capital bird. *Brahmas* were a bad lot with the exception of the three noticed pens, Messrs. Ansdell's and Smith's pens being empty. In the Variety class Malays were placed first and Black Hamburghs second; there were some good Houdans, except that they had the Crêve comb. Single *Game Bantam* cocks were not a good class, Black Reds winning first and second. The next class was, however, better, the first going to a grand pair of Black Rose-combed, second to good Piles, and third to Brown Reds; we would, however, advise a revision of these classes. *Geese*, *Turkeys*, and *Ducks* were few in number, but the birds good in most of the classes. In the Selling class a nice pair of Partridge Cochins were first, and Gold-spangles second.

Pigeons were a good entry, many of the classes being heavy. Ponter cocks were first. The pens for this variety being rather too small they did not show well. First was a good Blue, and second a Black Pied. In hens a smart Blue was again first, and White second. In Carrier cocks both the winners were Duns; the first a large and strong young bird, second good in all points but eye-wattle, which was a little deficient, the others noticed being Blacks. In hens the first was Black, and second Dun. There was but one class for Tumblers, the first award being made to a capital Almond cock, and second to a Kite, a Blue Bald being very highly commended. Barbs a good class. First a Red cock, evidently young, about perfect, and in the pink of bloom; second a Red hen, good in all respects, but not in as fine order as the above. The whole class noticed. English Owls a fair class of twenty-two entries, the winners Blue cocks, the first a perfect-headed bird, but would be all the better of a little more gullet. Dragoons were very even in quality, and the contest was close, first and second being carried off by Blues, and third by a Red. There were, however, several birds that partook too much of the style and carriage of a Carrier. Antwerps a fair class, Silver Dun Short-faces being the winners, several otherwise excellent birds showing an inclination to a purl or frill at the base of the gullet. For Fantails the pens were rather small, so that the birds did not show well; the winnors were White. Trumpeters very good; first Mottles and second Black, all the class being highly commended. Nuns good and clean, and the winners free from trimming. Magpies also a good class, the winners, particularly small and neat, were—first Red, second Black. In the Variety class the first was a good White Owl, and second a Black Fairy Swallow; and in the Selling class the prizes were awarded to a Red-splashed Tumbler and an Archangel.

In Rabbits the Lop-eared class was unsurpassed by any we have ever seen at an agricultural show, every specimen being full of character. First was a Black-and-white Lop, not one of the largest, but of high quality, well marked and particularly silky in ears, 22 by 4¾; second a Tortoiseshell in fine bloom, 21½ by 4¾; third, the largest Rabbit in the Show, fine and sleek, but short in ear—viz., 20¾ by 4½, a Tortoiseshell; very highly commended a Black-and-white doe, by far the best in the Show, but in woeful condition, 22½ by 4¾. This we were informed was the cup-winner at Hull, but the condition must be altered ere she can win again. The highly-commended Rabbits all measured well, and it would not have been difficult to find places for many other prizes. In the next class first was a fairly good Himalayan, second a pretty good Belgian Hare, and third an Angora, this class completing the list. The birds were well attended to by an excellent staff directed by the Hon. Sec., Mr. Aspinal Clayton, in whose hands the sole management was invested.

Game.—1, W. Ormerod, Todmorden. 2 and *hc*, C. W. Brierley, Middleton. *Cock*.—1 and 2, C. W. Brierley.

Hamburghs.—*Golden-pencilled*.—1 and *hc*, G. & J. Duckworth, Church. 2, H. Pickles, Earby, Leeds. *Silver-pencilled*.—1, J. Robinson, Garstang. 2 and *hc*, H. Pickles. *Golden-spangled*.—1 and 2, G. & J. Duckworth. *hc*, H. Pickles. *Silver-spangled*.—1, J. Fielding, Newchurch. 2, J. Robinson. *hc*, H. Pickles; J. Fielding.

Cochin-Chinas.—1, A. Bamford, Middleton. 2, T. Aspden, Church. *hc*, R. Bowker, Billington; R. Holding, Oswaldtwistle. *c*, R. Bowker.

Dorkings.—1, J. Stott, Healey 2, W. H. King, Rochdale.

Spanish.—*Black*.—1, E. Siddall, Rawtenstall. 2, G. Barnes, Blackburn. *hc*, G. Barnes; D. Ashworth, Great Harwood.

Brahmas.—1, C. Holt, Rochdale. 2, R. Ryding, Eywood, Blackburn. *vhc*, G. Barnes.

Any other Variety.—1, J. Sanderson, Downham. 2, J. Robinson. *hc*, H. Pickles; G. Anderton, Accrington.

Game Bantams.—1, G. Anderton. 2, J. Saul, Preston. *hc*, W. Shenton, Lancaster. *c*, R. Almond, Salford; Billingham & Co., Burnley.

Bantams.—1, J. A. Dakin. 2, F. Steel, Halifax. 3, Billingham & Co. *c*, A. Taylor, Blackburn.

Geese.—1, J. Hoolker, Blackburn. 2, J. Christie, jun., Clayton-le-Moors.

Ducks.—*Aylesbury*.—1 and 2, C. Holt, Rochdale. *Rouen*.—1, C. Holt. 2, J. Houlker. *Wild*.—1, J. Whittaker, Rishton. 2, T. Greenwood, Darwen.

Turkeys.—1, J. Houlker. 2, J. Robert. *c*, T. Greenwood.

Selling Class.—1, C. W. Brierley. 2, G. & J. Duckworth. *hc*, G. Barn T. Aspden.

PIGEONS.

Poutters or Croppers.—*Cock*.—1, H. Yardley, Birmingham. 2, J. Richmond, Oswaldtwistle. *hc*, W. J. Warhurst, Staleybridge; W. Nottage, Northampton. *Hen*.—1, W. Nottage. 2, W. J. Warhurst. *c*, J. Richmond.

Carriers.—*Cock*.—1, W. Sefton, Blackburn. 2, H. Yardley. *vhc*, J. Stanley; W. Sefton. *hc*, J. Stanley; W. Sefton. *Hen*.—1, J. Stanley. 2, H. Yardley. *vhc*, J. Stanley; W. Sefton. *hc*, W. Sefton.

Tumblers.—1, J. Gardner, Preston. 2, W. J. Warhurst. *vhc*, T. & W. Oddie, Brierfield. *hc*, T. Charnley, Blackburn; H. Yardley.

BARBS.—1, J. Stanley. 2, W. J. Warhurst. *vhc*, W. Warburton, Flaxmoss. *hc*, J. Stanley; T. Peacock, Preston; H. Yardley.
OWLS.—*English*.—1, J. Richmond 2, T. & W. Oddie. *vhc*, J. Gardner; R. Boyle, Blackburn. *hc*, S. Lawson, Preston; J. Fielding; R. Boyls; T. Charnley. *c*, J. S. Titherington, Haslingden
DRAGOONS.—1, W. Sefton. 2, J. Stanley. 3, T. Charnley. *hc*, R. Taylor, Blackburn; J. Gardner; J. Stanley; W. Sefton; T. Charnley. *c*, H. Crosby, Cheshire; R. Pemberton, jun., Blackburn; Waddington & Booth, Burnley; W. Dugdale, Burnley; R. White, Manchester; W. Sefton; H. Yardley.
ANTWERPS.—1, W. Harrison, Burnley. 2, F. Woodhouse, Audley, Blackburn. *hc*, S. Lawson; J. Gardner; Waddington & Booth; J. Stanley.
JACOBINS.—1, J. Gardner. 2, S. Lawson. *hc*, J. Gardner; S. Lawson; W. Nutcliffe, Burnley; W. H. A. Millar, Walsall. *c*, J. Richmond; A. A. Vander Meersch, Tooting.
TURBITS.—1, T. S. Stephenson, Beverley. 2, J. Gardner. *c*, J. B. Bowdon, Blackburn; S. Lawson; R. White.
FANTAILS.—1, W. J. Warhurst. 2, J. F. Loversidge, Newark. *vhc*, A. A. Vander Meersch; S. Lawson. *hc*, J. Richmond; W. J. Warhurst; A. A. Vander Meersch.
TRUMPETERS.—1, A. A. Vander Meersch. 2, H. Yardley. *hc*, F. S. Barnard, Tottenham.
NUNS.—1 and 2, A. A. Vander Meersch. *hc*, J. B. Bowdon; J. Richmond; A. A. Vander Meersch.
MAGPIES.—1 and 2, J. B. Bowdon. *hc*, J. B. Bowdon; J. Richmond; W. J. Warhurst.
ANY OTHER VARIETY.—1, T. Charnley. 2 and *vhc*, J. Richmond. *hc*, J. B. Bowdon; A. A. Vander Meersch; J. Gardner; W. Dugdale.
SELLING CLASS.—1, W. Dugdale. 2, J. Richmond. *hc*, H. Crosby; A. A. Vander Meersch. *c*, S. Lawson.

RABBITS.

LOP-EARED.—1 and 2, J. Irving, Blackburn. 3, H. Prickworth, Moulton Marsh, Spalding. *hc*, T. & E. J. Fell, Blackburn; J. Irving; A. Shaw, Blackburn; H. Prickworth
ANY OTHER VARIETY.—1, F. Stansfield, Clayton-le-Moors. 2, J. Irving. 3, S. Buckley, Rochdale. *hc*, J. Irving; H. Prickworth.

JUDGES.—Mr. Simon Fielding, Stoke-upon-Trent, and Mr. Edward Hutton, Pudsey.

MORPETH SHOW OF POULTRY, &c.

THIS was held on April the 10th in the Corn Exchange, a place admirably adapted for the purpose. The Committee of Management being nearly all working men, it was gratifying to find their endeavours meeting with such an amount of success. To keep down expenses, everything connected with the Exhibition was done by themselves, and done well. The pens were arranged in the best possible manner; the birds were well attended to, and so were the visitors; the managers were courteous and obliging to everybody; and everybody was pleased. Such a Committee deserve success; and under their management the Morpeth Show should rise to an important position.

Cochins and *Brahmas* were good classes, the winners being large well-feathered birds. Only one pen of *Dorkings* was exhibited, which, however, deserved the first prize awarded to it. *Hamburghs* always muster well in Northumberland, and they were quite up to the usual standard here. The *Game* classes were large, and contained many excellent birds. Game *Bantams* are the pets of the district; and we were not surprised to find so many grand birds among them. The winner in the single cock Bantam was one of the best Black Reds we ever saw, splendid in feathering and style. The winners in the Variety class (Bantams) were all Black. Single cock class was won by a grand Buff Cochin; second Brahmas. Any variety was won by Golden-spangled Polish; Crêve-Cœurs being second. There was only one class for *Ducks*, which doubtless limited the entries; good Rouens took both prizes.

Pigeons were well shown, Pouters, Carriers, Owls, Turbits, and Magpies being exceptionally good.

There was only one class for *Cats*, and the Judge had considerable difficulty in deciding on their merits. The winner was a large black-and-white, with a fine skin; second and third beautiful greys.

COCHINS.—1, W. Swann, Bedlington. 2, W. Newbegin, Newcastle.
BRAHMA POOTRAS.—1, T. Oliver, Burradon Colliery. 2, W. Swann.
DORKINGS.—1, W. Swann.
SPANISH.—1, T. Oliver. 2, R Smith, Bebside Colliery.
HAMBURGHS.—*Golden-spangled*.—1, A. Stephenson, Dudley Colliery. 2, T. Marshall, Mitford. *hc*, J. Morton, Choppington Colliery. *Silver-spangled*.—1, W. Johnson, Cowpen Colliery. 2, W. Nixon, Morpeth. *Golden-pencilled*.—1, D. Chyne. 2, T. Marshall. *Silver-pencilled*.—1, Davison & Pattison, Bebside Colliery. 2, J. Morton.
GAME.—*Black or Brown Reds*.—1, T. Middlemiss, Seaton Delaval. 2, C. Taylor, Sunderland. *hc*, J. Young. *Any other variety*.—1, T. Young. 2, J. Douglas, Cambois Colliery.
BANTAMS.—*Game*.—*Black or Brown Reds*.—1, G. Bell, North Seaton. 2, G. Dowie, West Sleekburn. *hc*, J. Short, Bedlington; T. Heslop, West Sleekburn. *Any other variety except Game*.—1, J. Durning, Cambois, Blyth. 2, D. Chyne. *hc*, J. H. Law, Birmingham.
BANTAMS.—*Any variety*.—*Cock*.—1, G. Dowie. 2, W. Swann. *hc*, E. Rutherford, Sleekburn Colliery.
ANY VARIETY.—*Cock*.—1, A. Stephenson. 2, T. Oliver. *hc*, J. Stark.
ANY OTHER VARIETY.—1 and *hc*, R. Parsons. 2, W. Atkinson, Morpeth.
DUCKS.—*Any variety*.—1 and 2, W. Swann.
SELLING CLASS.—1, J. Young. 2 and *c*, H. Sharp.

PIGEONS.

POUTERS.—1 and 2, H. Simpson, Shankhouse.
CARRIERS.—1, H. Simpson. 2, W. Nixon.
OWLS.—1, E. Walker, Hexham. 2, T. Arkle, Morpeth.
FANTAILS.—1, H. Simpson. 2, P. Wilson, Pegswood.
TURBITS.—1, H. Simpson. 2, P. Wilson.
NUNS.—1 and 2, P. Wilson.
MAGPIES.—1 and 2, P. Wilson.
DRAGOONS.—1, E. Walker. 2, T. Arkle.
ANY OTHER VARIETY.—1, H. Simpson, Shankhouse. 2, P. Wilson. *hc*, S. Hume, Morpeth.
SELLING CLASS.—1, P. Wilson 2 T. Gardiner, Swalwell.

CATS.—*Any variety or colour*.—1, F. R. Nichol, Morpeth. 2, Miss M. Nich Morpeth. 3, T. Marshall, Mitford.

JUDGE.—Mr. F. E. Schofield, Morpeth.

THE COMMON PIGEON.

MUCH has been written on what are called "fancy Pigeons," and much has been done for their preservation. Their value tends to this, and as well induces fanciers to search even in foreign lands for them. They have many admirers, and their various characteristics attract the attention of the most cursory observer. But what of that beautiful bird the common Pigeon? In my wanderings in other cities, as time permits, I call at the various bird shops, where, if nothing new is to be seen, there is still no lack of interest, and there I am sure to find what I am told are "only shooters." It often makes my heart sad to see them (and I am often tempted to call in the police) undergoing the first of the agonies to which too many—aye, far too many—of those poor things are doomed. Just look at them: one, two, or three dozen pent-up, closer than penned sheep, in some old cage, basket, or box; they have fought themselves tired; those feathers which the highest authority has described as being "covered with yellow gold" are ruffled, torn, and dirty; they have had no food or water for no one can tell how long; they are and have been in a state of semi-starvation. And what is their end? They are carried out to some open part of the country, each bird placed in a small condemned cell called a trap, and when it emerges into supposed liberty, unless the executioner fails in his aim, end their miserable existence by fluttering downward to the earth, wounded, bleeding, and dying; and what is all this to satisfy? The vicious appetites of heartless men, and I feel forced to say also that women patronise this so-called "sport" by applauding the performances of their friends. Were those men and women the roughs or scum of society there would be some excuse which I could bring forward; they are not of this class, but of the class known as ladies and gentlemen, and no doubt also professing christians.

Were those poor birds shot for the purpose of augmenting the food of the country some excuse, paltry however it might be, could be set up; but it is not for this purpose, it is a "sport," so called and reported in the newspapers. If this is not "cruelty to animals" I don't know what is, and it is time that the Society for the Prevention of Cruelty to Animals took the upper hand in this matter. Our national poet, on seeing a wounded hare limp past him, wrote on the act of the sportsman—

> "Inhuman man! curse on thy barb'rous art,
> And blasted be thy murder-aiming eye;
> May never pity soothe thee with a sigh,
> Nor ever pleasure glad thy cruel heart!"

I would not go so far as this, but I think the man or woman who can make this cold-blooded cruelty a "sport" or pleasure can have very little heart, and deserves very little sympathy.

If they will amuse themselves by hitting something in motion in air, let some one toss up an old shoe for them and try at that, or anything else they choose, but pray spare the life of an innocent bird.—JAMES HUIE.

ENGLISH OWLS.

MANY thanks to "WILTSHIRE RECTOR" for his few encouraging remarks upon English Owls. Indeed, when we find also two of our best Pigeon Judges, Mr. Esquilant and Mr. Jones, with their many opportunities of seeing and comparing all the varieties, both admirers and breeders of the English Owl, we do not anticipate this breed will ever be talked or written down by gentlemen who are endeavouring to wipe out a variety which is a source of pleasure and interest to a large number, and which, in spite of the increase and spread of the "African," is becoming more popular every day, as may partly be seen in the increasingly well-filled classes when provided for this breed.

The arguments of Mr. Lyell against the English Owl are chiefly based, as stated by him in his last sentence, upon what he has read in a book published one hundred and ten years ago. Does Mr. Lyell mean to say that during this more than a century the whole Pigeon fancy has been at a standstill, and that what was then described as a short-faced bird would be short-faced now, or a small Tumbler then a small Tumbler now? Of course there may have been a few really small Tumblers—weakly birds like the often one unfortunate in a brood of chickens or a litter of pups—but I am sure the average size would be far above what Mr. Lyell would lead us to believe by his quotation; and as for the general point, all the really old representations I have seen are far behind the best birds (I am speaking of all varieties) of the present day, and even if there are any good plates, they only represent ideal specimens. I am sure that fancy Pigeons a hundred years after this, though they may be vastly superior to those of the present day, will not excel those represented in the plates in Mr. Fulton's book. Perhaps some now young faucier will fifty years hence be pointing to these plates, and with a sorrowful shake of the head saying, "See what they were like in my days; then Pigeons were Pigeons."

To return to Owls in particular. I cannot be persuaded otherwise than that the English and the African Owls are quite distinct varieties. The English variety is mentioned long before the Africans were known, and the latter are mentioned in Mr. Tegetmeier's Pigeon book as being a great curiosity when introduced at a comparatively recent date. It is certainly curious if our English birds are, as stated, degenerate descendants of the little Africans, how the latter can have been lost sight of during so many years. Then the colours are against such a supposition. In Africans we have black, blue, and white, principally the last colour; while in English we have blue, yellow, and especially silver and powder blues, while whites and blacks are scarcely ever seen.

To sum-up, Mr. Lyell, as a fancier, no doubt knows that perfect specimens are not to be met with every day, but if he will "just hae patience" he will find that there are pure English Owls to correspond with the description in his quotation, if, as I understand it, the beak referred to means such as is seen in what is called a down-faced bird (and therefore resembling the Owl), not an overgrown upper mandible, which is, of course, a malformation.—T. G. Sprunt.

ARTIFICIAL COLOURING OF BIRDS.

To-day I had the pleasure of a call from Mr. Gresham, who, while admiring a Yellow Pouter in my aviary, said, "Do you use cayenne?" At one time I did think of trying it, but gave up the idea, as I do not like anything artificial tending to alter the colouring of Nature in birds. Indeed, however much natural colouring may be intensified by art, whether by external application, or internal by means of feeding, it appears to me, after all the trouble, to be but a hollow victory, a transient show. The application must be repeated each year with more or less success.

It is now some time since a great deal of fault-finding was made against certain of our Canary breeders. Some thought their birds were painted, others coloured with dye, and others that the sand used in their cages was the cause of the high colour in their birds. To test this matter even chemists were employed, and because of those surmises, if I recollect rightly, a degree at least of dishonesty was attributed to the owners. I would not be so uncharitable as to say that there was a species of envy shown on the part of the fault-finders, but by-and-by it came out that no external colouring had been used, but that any amount of internal colouring matter had effected the purpose; and strange, at least to me, this internal artificial colouring has been very generally adopted by breeders of certain varieties of Canaries, and many of their birds have taken highest honours at shows. So far from this being challenged by exhibitors or judges it is now quite understood; the birds are called "hot-fed" birds, and the best dyer has the best prize. Now, I should like much to be enlightened upon the difference between the effect of outside and inside dyeing or artificial colouring. It looks to me one and the same, and puts me in mind of the Irishman at the railway station, who politely said, "Will you show me the entrance out, sor?"

Supposing this process could be extended to the colouring of Pigeons of all or any colour, it would become a very dangerous weapon in the hands of the unprincipled. We could never be sure of the colour of the birds we were purchasing; besides, it would have the effect of putting an end to our shows, and reduce our fancy from a science to a mere piece of mechanical jobbery.

I used to be largely in the Canary fancy, and still have a great leaning towards it; and were I in it again should try to produce birds of high colour without any artificial means beyond the process of selection. I think this artificial system of colouring should be discouraged. It could be done, though not easily I will admit, but the sooner the better if colour is so essential to carry the honours. While naming colour, as an old Canary fancier allow me to say, though I throw cold water on no one's fancy, that I do not see so much in the mere colour of a bird, particularly of a Canary—*i.e.*, in the intensity of colour. I think there is far more in shape, marking, and size. The German Canary I keep for song only, and I think, and one of the best judges in England of Canaries agrees with me, that there are only four varieties of Canaries worth the breeding.

First of all the Belgian for shape. There is grace in every line and elegance in every motion; he is the highest-bred bird of all. Second, the Lizard for markings; beautiful, trig, and unique in all his markings and colour, whether silver or golden. Third, the Lancashire Coppy, Crested or plain for size, and, as the gardeners say, for substance. He is a striking bird to the most cursory observer; and last, the German for his song. What his origin has been I cannot tell, but he and the Norwich, to my eye, are much of the same make.

Now, some of my friends will say I am down on the Norwich. Not so; but I can see no difference in form between the German bird, the old-fashioned Canary, and the Norwich. Will anyone enlighten me? Being exceedingly practical, I should like to see specimens if told there is a difference.—James Huie.

SELECTION OF CANARIES FOR BREEDING.

Although of the greatest importance many make but sorry work of it, pairing with little consideration as to the result; consequently after all their care and expense they are disappointed by continually producing birds below their ideal standard.

It is not in every instance that like produces like. Birds that have gained a season's honours frequently disappoint those who purchase them by throwing a degenerated progeny, whilst other birds who possess no such evident qualifications to recommend them frequently produce some of the best representatives of their variety. This is to be accounted for by the fact that many prizewinners are the results of cross-breeding.

Our endeavours should be by constant selection to secure a pedigree stock with known qualifications. Every pair of birds should be matched with a definite object in view. Peculiarities may be perpetuated and thereby made to become properties of the highest order, for they may be so inbred by selection as to establish decided varieties.

As an illustration we will endeavour to trace the origin of one of our known varieties, and for this purpose cannot make a better selection than the Cinnamon, which has made rapid progress toward excellence during the last few years. This variety has been acknowledged to have originated in the bronze green, and through an intermediate variety ultimately to have arrived to its present state. Carefully examine any cage of ordinary mixed birds not giving very decided indication of extreme cultivation, and it is more than probable that you will discover some of the Greens with very decided indications of cinnamon colour: this frequently exists about the back and lower extremities of the body. Assuming that we start with a few selected pairs in which this peculiarity existed in the highest degree, it is more than probable that some birds would be produced partaking in a greater or less degree of these peculiarities, but more fully developed; and by again selecting those approaching nearest the ideal sought we shall continue to strengthen the power to produce the wished-for qualities. But during this process of in-breeding we have degenerated in general physical qualities, which by judicious crossing we are enabled to remedy, and at the same time add to the progeny of such birds properties not hitherto possessed, but which in combination with the cultivated peculiarities of the original birds have produced the variety now distinguished by the designation of Cinnamons.

Yet it is by no means positive, if we continue to breed direct from the progeny of the last crossing, that we shall perpetuate this excellence. It is necessary that the effects of the cross-breeding should be toned down.

That the yellows and greens are incorporated in this variety we are certain from the frequency of reversions, or sporters, with decided yellow or white feathers from the same nests, or at least from the same parentage, which for several generations have been bred from pure birds.

At the last Crystal Palace Show there was a very evident exemplification of the effect of cross-breeding in the high-coloured Cinnamon class. Birds of a most beautiful colour and of splendid proportions very deservedly took the highest honours, although they gave strong evidence of not being of the purest caste. The characteristic features of the Norwich blood being very prominent at once suggested the source from whence their astonishing beauty had been derived. Whilst numbers of birds of the purest Cinnamon blood, most of them the property of one eminent breeder of the variety, gained only honourable mention. These last-named birds had been for years bred only from the finest selections of his own and other celebrated pure Cinnamon birds.

By crossing all varieties improve, but the direct progeny of such birds degenerate unless neutralised by judicious pairing: hence the difficulties so frequently encountered in our endeavours to secure excellence by breeding direct from a pair of purchased birds with whose descent we are unacquainted, and the necessity of breeding-up from our own stock at least one side of the parentage the properties of whose pedigree we well know.

Prizewinners have often been bred from judiciously crossed pairs, but it seldom happens that there are more than one or two such birds produced during the season by one breeder; but by selecting the more favourable specimens, and again pairing with pure blood, the strain is frequently much improved.

When pairing for excellence all properties must be duly considered, and where any advantageous peculiarity exists it must be assiduously cultivated. Excellence of the highest order can only be arrived at by continuous selection. Form, colour, quality of feathering—in fact all properties, are capable of cultivation, and may be more or less prominently developed by these means.

With regard to the Norwich variety—the one wherein colour is an indispensable qualification, how much has been done is very evident, irrespective of the new means of producing it by feeding. What can compare with the magnificent effect of a rich Buff specimen of this variety or a grand Jonque of the same family? They are repeatedly being staged at the Palace in the greatest excellence. Amateurs are continually purchasing such

birds for breeding purposes, yet how few new names appear in the prize lists! Why should this be the case? Because they continue to breed direct from the clear birds; and we may naturally conclude that the clears have arrived at the highest degree of perfection, which, should we continue to match clear with clear, produces colour in a diluted degree.

Colour is supposed to be derived directly from the Greens. Many old hands who have gained high honours in their time bear testimony to the fact, by stating it to be their belief if we should lose the Greens we should lose colour. As these rules have been carried out from the earliest times by great fanciers, it seems proved that to obtain colour we must not breed direct from clear birds, which at once justifies the correctness of selection and judicious crossing.

In pairing, Jonque should as a rule be matched with Buff birds. Where Jonque and Jonque are bred from, size is generally lost and an undesirable peculiarity of feathering produced. Where Buff and Buff are matched it is generally at the expense of colour but to the advantage of size, with an extraordinary exuberance of fine feathering.

On the other hand, we have a remarkable illustration of the consequences of consanguinity in pairing in the rapid degeneration of the variety known as the London Fancy Canary, once a favourite bird with all metropolitan breeders; at one time existing in goodly numbers, but now so nearly extinct that there are not more than from six to seven breeders in the kingdom, and possibly not one hundred representatives of the variety in actual existence. Unless some decided measures are taken at once to regenerate this beautiful but peculiar variety of the Canary it must ultimately cease to exist. There are but two or three breeders who have what may be considered robust representatives of this class, one a veteran of London, the other a gentleman amateur of Devonshire, to whom much credit is due for their steadfast perseverance to maintain the continuance of these birds. New blood to a limited extent has been infused into their strains.—J. Packham.

LONDON FANCY CANARIES.—No. 2.

A noted breeder relating to me his experience in Canary-breeding, once remarked, "Thirty years ago I first commenced breeding London Fancy Canaries. At that period there were established five Societies—viz., the Sovereign, the Royal, the Friendly, the Amateurs, and the Hand-in-Hand. The last-named Society carried on its business at a tavern known by the name of the 'Crown,' in Museum Street, Bloomsbury, Mr. D. Horne being the President. Other societies can be traced back for a century. The Hand-in-Hand Club came to grief somewhere about the year 1870. The chief aim of the members, as appears from the title page of the book of rules in my possession, was to improve the breed of Fancy Canary birds."

Before I proceed to remark upon the moulting process adopted by the members, I will give the characteristics of the two kinds known by the terms "Jonque" and "Mealy."

Colour appears to have been a great consideration. The Mealy birds should have their feathers fringed or edged with white, which feathers falling closely over a bloomy-coloured specimen shows to advantage that beautiful flowery or frosted appearance so much admired both by judges and fanciers. The Jonque birds should be the colour of a deep orange, with a silky quality of feathers. The black feathers in the flights and tail should be as bright as possible, but blackness of feather is considered more when colour is equal in two birds. The cap is the principal point; next breast, saddle, and back. Cap, saddle, and back will surpass breast, saddle, and back; cap and breast will beat saddle and back; but breast, saddle, and back will defeat cap, although the first point.

In a first-class show bird every feather in the flights and tail should be black in stalk or web, and not one entire white feather. Each flight should number eighteen feathers, and the tail twelve. The Hand-in-Hand regulations state, "No bird shall be considered a fair show bird that has a feather or feathers without black in stalk or web, in the flight or tail feathers, or that has less than eighteen flying feathers in each wing, and twelve in the tail."

In close judging it is often necessary to take the birds out of the cages to decide upon their respective merits, and this should never be attempted but by those who are qualified for their duties. There is an advantage in being what is termed or known in the fancy as a good "handler." Quality of feather is better decided upon with birds in the hands than when they are in cages. But a judge with a good eye may quickly use his power of discrimination, and settle matters which may appear somewhat doubtful to those lacking that advantage.

The following are the chief points by which the birds are judged:—

Cap—for colour, magnitude, and regularity.

Colour—for richness of yellow, not only in the cap, but throughout the bird.

Wings and Tail—black, home to the quills.

Size—for largeness and general elegance of shape.

**Pinions*—for magnitude and regularity.

**Swallow-throat*—for largeness.

**Fair breast*—regular.

**Legs*—blackness.

**Flue*—blackness.

Those points with an asterisk (*) prefixed, are specified as "additional beauties."—Geo. J. Barnesby.

PROPOSED SCHEDULE OF PRIZES FOR THE MANCHESTER BEE AND HONEY SHOW.

CLASS A.

1. For the best and largest results, or harvest, obtained from one stock of bees managed on any system, swarming or non-swarming, first prize, £4; second, £2; third, £1.

2. For the best and heaviest hive filled by a single swarm of 1875, first prize, £3; second, £2; third, £1.

3. For the best and heaviest second swarm, or turn-out, of 1875, first prize, £2; second, £1.

4. For best straw or wood super of honeycomb above 20 lbs., first prize, £2; second, £1.

5. For best glass super above 20 lbs., first prize, £2; second, £1.

6. For best straw or wood super above 10 lbs., first prize, £2; second, £1.

7. For best glass or wood super above 10 lbs., first prize, £2; second, £1.

8. For best glass super under 10 lbs., first prize, £1; second, 10*s*.

All the above to be the products of this year, filled in a natural way, and exhibited without bees, with their weights (gross and tare) ticketed on them.

9. For the best observatory or unicomb hive, first prize, £3; second, £2; third, £1.

10. For most ornamental hive—made of glass or glass and wood, first prize, £2; second, £1.

The above (9 and 10) to be exhibited with bees in them.

11. For best sample of 10 lbs. of run honey, 10*s*.

12. For best three cakes of wax, not less than 1 lb. each, 10*s*.

CLASS B.

13. For best bar-frame hive, £1.

14. For best straw hive, £1.

15. For best and largest collection of hives, bee furniture, and other necessaries for an apiary, first prize, £5; second, £2; third, £1.

16. For a collection of the best and cheapest supers (empty) for general use in an apiary, £1.

This schedule has been planned and written out with a view to make the bee and honey corner of the Exhibition at the Manchester Botanical Gardens next September as interesting as possible to visitors generally, and profitable and instructive to bee-keepers.

About £10 are offered for glass hives exhibited with bees in them, which generally please spectators. As the Show will last three days, arrangements will probably be made for the bees to fly abroad. If the weather be fine the bees flying about may smell the honey hives exposed to view. In such a case the bees would have to be confined to their hives, for it would not do to let visitors be startled and frightened by bees.

The schedule is, of course, subject to improvement or alteration. If more than £50 can be obtained by promise, more or larger prizes will be offered; and if any gentleman or number of gentlemen combined would like to see any question in apiculture fairly tested, and consent to give a prize for that object, we shall be glad to put it in the schedule.

At the Manchester exhibitions there are no entrance fees required, and the prizes are given at the close of the shows. Entries and inquiries will be received by Mr. Samuel Yates, 16, Old Millgate, Manchester, or myself, till the Friday before the opening day, which, I believe, is the 2nd of September.

All competitors and exhibitors will be permitted to sell their exhibits in the gardens.—A. Pettigrew, *Sale, Cheshire.*

LIGURIAN AND COMMON BEES.

I regret much that Mr. Bagshaw's challenge to test the working powers of Ligurian and common bees has not been accepted. Letters of inquiry as to the relative and comparative worth and merits of these bees are received from many persons, which letters are answered privately, to the effect that there exists no satisfactory evidence or proof that Ligurians either breed more or work better than common bees.

Some of my friends predicted that those who spoke loudest in praise of the Ligurians would be the last to come to the test of experiment; and so it appears, for one of your correspondents questions the wisdom of settling the matter, and thus removing all doubt, while he would have us believe without evidence that the Ligurians are superior. I have not his letter by me, but if my memory serves me well Mr. Hunter said, "If the Ligurians are better breeders, it follows that they will be better workers."

What does "if" indicate? It is that "if" we are seeking to remove.

I will here repeat that it has not been proven that Ligurians are better breeders than common bees, or better workers. They may be, but we have no evidence of it. I have seen, perhaps, the largest hive that was ever peopled by bees in this country filled with brood by common bees from side to side. There was as much brood in this hive as we can find in four or six ordinary-sized bar-framers, and this may be seen again and again. Where, then, is the evidence that common bees are not so good breeders as the other sort?

Our friends are "nonsuited," and will remain nonsuited till they produce a witness in court. We ask them to produce evidence, and encourage them to do so by assuring them that such evidence would gratify us and others very much.

I intimated last year that my own apiary would be converted into an experimental one, but owing to family affliction and other causes it has not yet been done. But I will here suggest a simple experiment to test whether the Ligurian queens lay more eggs than those of common bees. Let a swarm of each sort be put into a hive filled with empty combs for three or six days, and then count the eggs laid by each. Three such simple experiments would go far to settle the question, and it would give me pleasure to lend a helping hand by placing hives of empty combs and swarms at the call of those who may be willing to take the matter up. More I cannot do at present.—A. Pettigrew.

OUR LETTER BOX.

Chickens Dead in the Eggs (*C. Brown*).—As the hens sat steadily and were not allowed to be off too long, we have little doubt that the dryness of the wooden nest-boxes raised from the floor, rendered the shells too hard for the chickens to break. See what we say to another correspondent to-day.

Incubator (*R. P. G.*).—If we inserted your letter we must do similarly for others who have employed those of other makers. All incubators will hatch eggs in proportion to the careful management and other circumstances.

Sitting Nests—Perches (*Elstree*).—Sitting hens should sit on the ground. Chickens never come out so well and so strong as when a hen steals her nest. In that case it is always on the ground. Even where the hen sits in a box or basket which stands on the ground the bottom of the nest should also be a large sod of grass cut with plenty of earth to it. Bad perches will cause crooked breasts, but they are also indicative of weak constitution. Perches should be within 24 inches of the ground. A fir pole 14 inches in circumference sawn in half, placed with the round side uppermost, and with the bark left on, makes an excellent perch.

Sneezing in Fowls (*J. W.*).—We advise you to adhere to Brahmas. They are subject to none of these disorders. Your old birds will probably recover, at least partially, as soon as the east winds leave us; but we have no hope of the chickens growing up well if they too sneeze. Your present treatment will be to keep the birds scantily supplied with water, to feed on ground food, and if the unkind weather returns to mix some good strong beer with it. We presume your fowls are in confinement. If so they must be daily supplied with large sods of growing grass cut with plenty of earth. It is likely this may be a remanet from the roup; that would not alter the treatment.

Geese this Spring (*H. H. C.*).—Our experience is the reverse of yours We have never known the eggs produce better. Where the sexes are properly kept, and where gander and Geese have been used together, we do not believe in the failure of eggs. We know that a strange gander put down to Geese will not take to them directly, and the first eggs should not be set; but after an acquaintance is formed, if all the eggs fail either they are frosted or the Geese have eat badly.

Substitute for Canary Seed (*W. M. Grose*).—Canary fanciers have of late been put to their wit's ends as to finding a really good substitute for canary seed, owing to it being so enormously high in price. We have no hesitation in recommending millet seed as the very best substitute for canary; it can be used advantageously with hemp, rape, linseed, and groats. For several weeks past we have almost entirely discontinued the use of canary seed, and our birds never appeared in better health and condition. Our reason for so doing has been that we have not wished to encourage the extravagantly high price of canary seed. Millet seed partakes more of the properties of canary, being nourishing and warm. It is not an oleaginous seed, but possesses a starch-like property, and is suitable for supporting both bone and muscle. The white millet is the best for cage birds, being sweeter and more preferable than the yellow kind, which is more suitable for fowls. The Spice Birds, Java Sparrow, and other small foreign birds you name will thrive well on "two of millet and one of canary." A piece of salt about the size of a Spanish nut may be placed in the cage occasionally, whether your birds be well or unwell. The birds will not partake of more than will benefit them. The system requires a certain saline supply, which is requisite for keeping the blood in a proper healthy state; disease thereby is often checked. We recollect being once asked, "What is the size of a lump of chalk?" Our idea was that it meant a large piece. By the same rule we may suppose that a "lump of salt" means a large piece. In our remarks upon "Canary wheezing," p. 288, we believe we advised the necessity of putting inside the cage a "small piece of salt" to supersede the sugar (lump of course), therefore we are not sure that a lump of salt would be needed by your birds.

Java Sparrows (*M. H. F.*).—We have always had a great fancy for these very beautiful close-feathered cage birds, but we never put up a pair for breeding purposes. If you intend so doing, supply them with white millet seed and a little egg and biscuit mixed, in addition to their usual rice and canary seed.

Bees Killed by Cold (*C. H.*).—The bees you found with pollen on their legs beneath the flight-board were chilled and benumbed by cold. Those forwarded for examination appear to be young bees, chilled and killed on making their first attempt to work. We have found many such chilled into a motionless state on the flight-board, and therefore quite unable to crawl into their hives. Young bees, like young chickens, cannot bear much cold. If bees simply chilled and motionless, be placed in a warm place their powers will speedily be restored.

Bar-framed Hives (*F. J., Cork*).—You cannot do better than order one of Abbot's "new frame bar-hives," which are really marvels of cheapness and excellence of workmanship. The cost of hive complete with roof, reversible floor-board, and two Crystal Palace prize supers, can be had of Mr. James Lee, Bagshot, for £1 17s. 6d., but you can have a still cheaper hive on the same principle, of Mr. Abbott, Hanwell, W., for 6s. 6d. We have both these hives and can hardly imagine anything better. Common English bees are very good indeed. Doctors differ as to whether they or the beautiful Italian bees are superior in point of honey-gathering powers. Fifteen shillings is not too much to pay for a thoroughbred Italian (or Ligurian) queen.

Bees in Common Hives (*B. L. B.*).—Let your bees swarm naturally, and put the swarms into the hives you wish them to fill. Probably they will swarm twice, but if they swarm once only you may fill another hive by driving all the bees out of the old hive into it three weeks after the first swarm shall be had. Thus two good swarms will be obtained, and the honey from the old stock. If a second come off naturally you will have bees to put into your three new hives; but do not attempt to divide a swarm with a view to multiply your stocks. Neither can a stock be created by placing a bit of broodcomb in an empty hive without a swarm. Brood requires both warmth, and food, and will perish in the absence of bees to impart them.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 33′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. April.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We 14	30.332	41 9	39 7	S.	43.6	56.0	31.3	95 4	28.2	—
Th. 15	30 395	41 1	40.3	N.	43.8	54.7	37.2	88.8	34.1	—
Fri. 16	30 374	44.0	41.3	S.E.	43 8	56.7	32.7	87.8	30 0	—
Sat. 17	30 240	48.2	43.9	N.E.	44.2	61.8	33 2	97 2	30.5	—
Sun. 18	30.098	52.5	45.9	S.E.	44.8	63.6	34.9	100.8	30 4	—
Mo. 19	30 126	54.2	48.1	E.	46.1	69.7	35.2	108.7	32.0	—
Tu. 20	30.183	51.9	48 9	N.E.	47.4	70.9	37.1	101.3	33.6	—
Means	30.250	47.7	44.0		44.8	61.9	34.5	97.3	31.3	—

REMARKS.

14th.—White frost early; then bright till 9 A.M., when it came over very dark, and so continued until 11 A.M.; bright and fine afterwards.

15th.—Fine morning; day rather dull at times.

16th.—Cloudy morning, but fine pleasant day.

17th.—White frost; misty early; bright warm day; misty evening.

18th.—Cold in early morning, with traces of frost; beautifully fine day.

19th.—Warm and bright throughout the day. Air very dry, as the following figures prove:—

	Dry ther.	Wet ther.	Difference.	Dew point.	Humidity. 0.100
	°	°	°	°	
9 A.M. ..	54.2 ..	48.1 ..	6.1 ..	42.1 ..	64
11.30	64.4 ..	55.5 ..	10 9 ..	44.5 ..	48
0.30 P.M.	66.6 ..	53.4 ..	13 2 ..	42.8 ..	42
1.30 P.M.	67.9 ..	54.8 ..	13.1 ..	44 4 ..	43
2.10 P.M.	68.0 ..	54 0 ..	14 0 ..	42 9 ..	40
3.0 P.M.	56.6 ..	53.6 ..	13.0 ..	43.2 ..	43
5.0 P.M.	69.4 ..	49.4 ..	10.0 ..	40.6 ..	49
9.0 P.M.	48.2 ..	42.9 ..	5.3 ..	37.1 ..	66

20th.—Air not so dry, nor so clear; sun temperature lower; and in the evening air quite thick; clearer at night.

A very fine and absolutely rainless week.—G. J. Symons.

COVENT GARDEN MARKET.—April 21.

A slight improvement in trade has taken place, rough goods being in very fair request. Continental supplies are much favoured by the present weather, and comprise Asparagus, Beans, frame Potatoes, Artichokes, young Carrots, Turnips, the usual varieties of Cos and Cabbage Lettuces, Endives, and Green Peas.

FRUIT.

		s.	d.		s.	d.			s.	d.		s.	d.
Apples	½ sieve	2	6	to	3	6	Oranges	℔ 100	8	0	to	12	0
Chestnuts	bushel	10	0		20	0	Pears, kitchen	doz.	2	0		3	0
Filberts	lb.	0	0		0	0	dessert	doz.	8	0		12	0
Cobs	lb.	0	0		2	0	Pine Apples	lb.	2	0		6	0
Grapes, hothouse	lb.	12	0		20	0	Plums	½ sieve	0	0		0	0
Lemons	℔ 100	8	0		12	0	Walnuts	℔ 100	8	0		12	0
Melons	each	0	0		0	0	ditto	bushel	1	0		1	6

VEGETABLES.

		s.	d.		s.	d.			s.	d.		s.	d.
Artichokes	dozen	3	0	to	6	0	Leeks	bunch	0	4	to	0	0
Asparagus	℔ 100	6	0		10	0	Lettuce	dozen	1	0		2	0
French	bundle	6	0		15	0	Mushrooms	pottle	0	9		2	0
Beans, Kidney	℔ 100	2	0		3	0	Mustard & Cress	punnet	0	2		0	0
Broad	bushel	0	0		0	0	Onions	bushel	3	0		6	0
Beet, Red	dozen	1	0		3	0	pickling	quart	0	6		0	0
Broccoli	bundle	0	9		1	6	Parsley	doz. bunches	6	0		8	0
Brussels Sprouts	½ sieve	0	0		0	0	Parsnips	dozen	0	9		1	0
Cabbage	dozen	2	0		3	0	Peas	quart	4	0		7	0
Carrots	bunch	0	6		0	8	Potatoes	bushel	2	6		5	0
Capsicums	℔ 100	0	0		0	0	Kidney	do.	8	0		6	0
Cauliflower	dozen	4	0		8	0	Radishes	doz. bunches	1	0		1	6
Celery	bundle	1	6		2	0	Rhubarb	bundle	0	4		1	0
Coleworts	doz. bunches	4	0		6	0	Salsafy	bundle	1	6		0	0
Cucumbers	each	1	0		2	0	Scorzoners	bundle	1	0		0	0
pickling	dozen	0	0		0	0	Seakale	basket	2	0		3	0
Endive	dozen	2	0		0	0	Shallots	lb.	0	3		0	4
Fennel	bunch	0	3		0	0	Spinach	bushel	0	0		4	0
Garlic	lb.	0	6		0	0	Tomatoes	dozen	0	0		0	0
Herbs	bunch	0	3		0	0	Turnips	bunch	0	6		0	0
Horseradish	bundle	0	0		4	0	Vegetable Marrows	doz.	0	0		0	0

WEEKLY CALENDAR.

Day of Month	Day of Week.	APRIL 29—MAY 6, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m. h.	Sun Sets. m. h.	Moon Rises. m. h	Moon Sets. m. h.	Moon's Age.	Clock after Sun. m. s.	Day of Year.
										Days.		
29	Th	Zoological Society (Anniversary), 1 P.M. Royal Society	60.5	37.3	49.0	37 af 4	17 af 7	41 af 2	0 11	23	2 46	119
30	F	Royal Institution at 8 P.M. [at 8 30 P.M.	61.0	39.1	50.1	36 4	19 7	59 2	23 12	24	2 55	120
1	S	Regent's Park, Exhibition of Clematis by G Jackman	61.4	39.2	50 3	34 4	20 7	13 3	47 1	25	3 3	121
2	Sun	Rogation Sunday. [and Son.	62 7	39 1	50.9	32 4	22 7	26 3	13 3	26	3 10	122
3	M	Entomological Society, 7 P.M. Regent's Park, Mr. W.	62.4	42.2	52.3	30 4	23 7	38 3	41 4	27	3 17	123
4	Tu	Pathological Society at 8 P.M. [Paul's Ex of Roses.	62.4	38.5	50.5	28 4	25 7	51 3	13 6	28	3 23	124
5	W	Society of Arts, 8 P.M. Microscopical Society, 8 P.M.	62.9	39.0	50.9	26 4	27 7	8 4	48 7	☽	3 29	125

From observations taken near London during forty-three years, the average day temperature of the week is 61.9°; and its night temperature 37.5°.

EFFECTS OF THE EAST AND NORTH-EAST WINDS.

IT may appear something like horticultural treason to say anything in favour of the parching east wind of whose pernicious effects couplets, based on the experience of past ages, have long ago vented a meed of abuse very much approaching a curse, and compilers of almanacs have added their quota of dislike to the drying currents of air coming from that quarter. Yet somehow, like most other evils, the east wind is not altogether devoid of some useful qualities, and although it may not be good for either man or beast, as the distich goes, it exercises a beneficial influence on what both man and beast depend on for supplying their wants.

"Mother earth," especially when under an artificial course of management, derives considerable advantage from the unpleasant east wind; and for road-making it far exceeds Macadam or the other great authorities whose opinion in that way is so much acted upon. But it is only in the limited arena of artificial works that road-making by mechanical means is resorted to, and useful as that area is, it bears but a small proportion to the extent of surface which the east wind and its kindred one from the north-east operates so advantageously upon for all the purposes of easy and agreeable locomotion. In other words, the drying wind we have from that direction, licking up, as it does, every semblance of moisture, prepares the ground to receive any reasonable amount of weight upon it, which it could not bear without injury when in a wet state. So much, then, for the uses of the east wind in that respect.

Let us now see how it affects the husbandman, or rather the tillage land which he has to deal with, as well as the various squares and plots in the kitchen garden that may be more or less under its influence, and not forget the fashionable flower beds which at this season may be still more immediately within the scope of its operation. These and all other plots of cultivated ground so evidently benefit by the drying influence of this so-called nasty east wind, that we are constrained almost against ourselves to say something in its favour, notwithstanding the many diseases and discomforts it is blamed for bringing in its train. But as these matters have their exponents elsewhere, let us see how it acts as a fertilising agent, and a very slight survey will enable us to see that its influences tell to great advantage in the preparing of the soil for the various crops that may be put upon it. By its being the means of abstracting a great deal of the superfluous moisture by which the soil is saturated, and by penetrating itself, the hitherto soddened ground becomes to a great degree aërated, and in due time falls in a mellow form to the touch, and consequently all its component parts become available to the action of the roots of plants that may be planted upon it. In this respect the east winds of a dry March in some degree exercise the same fertilising mellowing powers that a hot dry summer does on lands that may be fallow at the time, the air being enabled to penetrate where the moisture had been withdrawn, and hence the beneficial effects of the otherwise uninviting east and north-east winds. In an usual way we are visited with easterly winds for a considerable time every spring at a period when the soil requires drying, and the presence of the wind is hailed as the commencement of a new state of things, and the drying effects of it are very acceptable.

Of the causes which render the east wind so pernicious in some respects it is not our purpose to inquire. Suffice it to say that in this immediate neighbourhood the number of days in which it blows from that direction is fewer than any of the other seven directions into which the compass is roughly divided. By taking the observation at noon each day I find the yearly average of days for plain east is about seventeen, while that of north-east is sixty-two; this being for a period of twenty-five years, the average may be regarded as a fair one. The south-west wind is the most prevalent, as well as generally the highest; while that from the north-east is deprived of much of its withering influences when it visits us in August and September, as it seems to have all the softness of that from a contrary direction, and vegetation is not a sufferer from it, further than that it is often attended by prolonged dry weather, and rain is hopelessly wished for during the time; nevertheless we now and then have very heavy rain with the wind in that quarter, the popular notion being that if we have rain at all with a north-east wind we are likely to have a good deal of it, and it often is so. On more than one occasion we have had considerably over an inch of rain within the twenty-four hours with a north-easter.

This is more especially likely to be the case in summer; in March a dry, chilly, cold atmosphere is more generally prevalent, which is good for the land that is in tillage, as has been explained, but not by any means agreeable to newly-planted plants, be they small herbaceous plants or evergreen shrubs; in fact, I am not sure if May be not a better month for the removal of the latter than March, as, a more genial atmosphere and a more quick root-action following, the plants do not suffer by the delay in waiting for a suitable season in which to repair the damages done to the roots, &c., by the removal. Nevertheless March is often of necessity an important planting month, trees and shrubs are not always ready before, and in the case of deciduous trees it answers very well if the operation be well done and the soil is in a fit state to receive the plants.

But all soil operated upon is not in a fit state; even that which is in tillage may have been turned up in wet weather, and its component parts may have been unduly trod upon and compressed when in a wet state, and hard, unkind, ugly lumps be the result, the lumps resembling in some degree sun-dried bricks, and if the planting has to be done before these yield to the mellowing influences of the wind alluded to, success is very uncertain. Where of necessity work must be done and crops put in while the soil is in this condition, they ought to receive

due attention afterwards. I am not certain but waiting awhile would be quite as well, only the usual abundance of work that crowds upon us at this season necessitates planting to be done when it can, and the cold winds have to bear the blame for the want of success which might have been different if sufficient time had been allowed for them to have done their beneficial duty towards our tillage lands.

There are other useful objects attained by these much-abused east and north-east winds; if they do chap our lips and hands, and cause many other discomforts, they benefit the general atmosphere in a sanitary point of view by removing or mitigating smells or other impurities, and thereby doing much to compensate for the bad name we have unthinkingly attached to them. And notwithstanding the delay they cause to vegetation and being blamed for late springs, we are not sure but these very delays are beneficial; and when a change does take place after the cold period everything seems to revel in it, and most likely the more so from its being withheld longer than expected.

Let us, therefore, not too hastily condemn the winds from the quarter alluded to, but justly reflect that, like many other so-mistaken evils, they all tend to a good purpose.—J. Robson.

THE SETTING OF FRUIT BLOSSOMS.

"Dewing the blossoms over with clear water from a syringe on the morning of a fine day is a good way to scatter the pollen and to promote fertilisation." Thus has Mr. Douglas written in his useful "Doings" on page 299. That is advice which is diametrically opposed to the settled notions of the great majority of gardeners, whose principal aim in the fruit-setting period is to have the atmosphere of their houses as dry as possible, and who would regard the wetting of the blossoms as an unpardonable blunder on the part of any assistant who should unfortunately commit such a great mistake. Yet for all that I am one who fully believes that Mr. Douglas never penned more sound advice or detailed any "doing" more likely to effect its purpose. The work, however, should be done exactly at the time and precisely in the manner stated. It should be dewing, not washing, and on the morning of a bright day, not of a dull one. In a word, the work must be intelligently performed, and it will prove a valuable auxiliary in the setting of fruit blossoms under glass, and also on south walls. The practice, however much one may be convinced of its efficacy, is of a nature to demand some moral courage to recommend. First, because it is antagonistic to generally recognised theories; and secondly, lest it should be overdone, or be done at the wrong time, and the blame be cast on the advice itself instead of on the bungling way in which it has been carried out.

Now, it may be taken as a fact that shoals of fruit blossom fall to the ground to the no small anxiety of the cultivator, and for which he can assign no satisfactory reason. Very frequently the blossom-shedding is a benefit to the trees, but often the fall is so extreme as to leave but little fruit behind for a crop. That happens both on the trellis under glass and on walls in the open air. When under glass the cause is generally sought for in overdryness of the soil, and in fact that is, despite all the advice given on the point, a great source of the premature dropping of fruit blossoms. But it can hardly be from overdryness of the soil when the blossoms drop from trees in the open air. There may have been no frost to account for it, or if there had the trees have been covered. It is, in fact, often from trees which have been covered during the night that the blossom falls the most extensively. This fact has led many people to lose faith in coverings, and instances have been by no means rare where an uncovered tree has carried a more satisfactory crop of fruit than has the one by its side which had been covered. It is because of that—covered trees failing to carry crops of fruit—that some people never protect their trees at all. Occasionally they pay the penalty of their temerity by having their blossoms frozen, but frequently they can point triumphantly to their crops when their neighbours who had protected their trees are grieving under a scarcity of fruit.

That blossoms are injured by frost is certain, and not much less certain is it that they are injured by a lack of moisture, as, for instance, the absence of dew. No doubt extreme wet is pernicious to the blossoms, and so also, but not so generally recognised, is extreme dryness to the embryo fruit. Under what conditions do blossoms on wall and orchard trees set the best? Is it during a period of brilliant days and dewless nights? No; blossom generally falls then. It is during mild weather with sun, yet with light spring showers occasionally falling, that blossoms are followed by fruit, and the trees become laden with produce. Why is this so? Note the blossom of a fruit tree at a period when dewless nights are followed by brilliant days. The petals lack substance, and are flimsy and crumpled; touch them and they fall. Examine them in more genial weather, when the sun is sufficient to dry them and the night dews and occasional showers are provided to refresh them. The petals are then much stouter in texture, and the blossom is more lasting; touch it and it is fast. That is the condition by which you may expect fruit.

Has it not been noticed that Apricot trees have in some years set their blossoms on a west better than they have on a south aspect? When such is the case the setting season has been remarkable for an arid air and unclouded sun. The blossoms and the embryo fruit could not sustain the transpiration they were called on to bear, and collapsed by sheer inanition. Their vitality was fairly extracted from them under the influence of the moisture-absorbing sun. That is especially the case with trees that are deficient in vigour, and which, as a consequence, are often excessively laden with blossom. These blossoms, weak to begin with, are almost certain to succumb if the air is exceptionally dry and the weather excessively bright during the time the trees are in bloom; whereas if they have the assistance of moisture to sustain them, and the young fruit have no check in being robbed of support during the process of setting, a pleasant sprinkling of fruit will follow.

Under an extremely bright and dry-setting season the shady side of a tree will often set the fruit, while on the sunny side the blossoms fall to the ground. Under those circumstances we generally attribute it to frosts which have come from the south. But it is the sun and not the frosts that have levelled the blossoms to the ground. I have in hot weather, and with weakly Apricot trees, had one tree laden with fruit, and the next barren, by simply dewing the blossoms of one with a syringe, and affording support to the embryo fruit at a critical juncture. I have had even, for the purposes of experiment, one side of a tree fruitful and the other side fruitless by the same means. I have seen a trellis completely wreathed with Peach blossom, which by a sharp shake during a brilliant setting period has fallen off by thousands, except a portion which has been dewed or even shaded for an hour or two, and this covered with fruit. I have seen Vines in blossom treated to a highly dry temperature, and the set of fruit of a most unsatisfactory kind, but have never had or seen any difficulty in setting Grapes when a healthy degree of moisture has been intelligently imparted to the atmosphere.

But there must be no mistake; extreme moisture is also inimical to the setting of fruit blossom. The pollen must be sufficiently dry for distribution, and must be distributed. That is what is required, and all that is required; and then a measure of moisture becomes as much a necessity to support the fruit as is, or was, the requisite degree of dryness to move the pollen. There are times when the blossoms of fruit trees are kept too dry—when the sun is powerful and the night dews prevented doing their restorative work. That is seen when covered trees are less fruitful than those which have been exposed.

The same law applies under glass. We may keep the air too dry, and permit the blossom to be played on by a burning sun, when the embryo fruit are gasping for want of a little moisture. But, as said before, this must be given carefully and at the right time. In preventing the roasting of the blossom let there be no drowning; but yet it is well to recognise that, however little the matter is thought about, that the blossoms of fruit trees can be shrivelled by drought and heat, and the embryo fruit be literally roasted on the trees, and then we wonder why the blossoms fall.

I conclude by asking that the quotation from Mr. Douglas be read again and thought about, feeling sure that it is sound and full of truth.—A Surrey Gardener.

ROSE FELIX GENERO.

In reply to "Cornubia" of March 25th, page 230, Rose Felix Genero I consider a good one for exhibition. I placed it with last year's election of fifty, and have shown it remarkably fine at South Kensington, Birmingham, and elsewhere last year, and also in 1873. On half-standards it does well. Prince Camille de Rohan, as Mr. Radclyffe states on page 292, was omitted by me in last year's election. I find it useless

with me as an exhibition Rose. I consider the last year's election of fifty Roses a good guide for amateurs.—J. Mayo, *Oxford.*

THE ROYAL HORTICULTURAL SOCIETY'S FLOWER SHOWS.

As one of the exhibitors I may be allowed to make a few remarks on the present aspect of affairs. The two spring shows have been held—the Hyacinth Show in March, at which prizes to the amount of £126 6*s.* were offered, but so few exhibitors came forward to claim them that the total amount awarded, less, of course, the 50 per cent. reduction, was only £12 12*s.* 6*d.* For April 21st a very good list of prizes were offered for Rhododendrons, Azaleas, Cinerarias, Auriculas, Grapes, Strawberries, and forced vegetables—in all, twenty-three classes. The number of competitors was but nine, and the amount of money awarded was exactly £8 7*s.* 6*d.* This is an amount of hard cash saved to the Society sufficient to satisfy the most rigid economist—twenty guineas in prizes for the two large Spring Exhibitions! Well might Fellows of the Society wander from one arcade to another inquiring for the Show, and when they did unfortunately discover the few plants, no wonder they turned away in disgust.

Now I think not only the Fellows but exhibitors also have a right to ask who is responsible for this state of things. Where does the blame rest, with the exhibitors or the Council? Now, I cannot see that any part of the blame can be attached to the exhibitors. After the schedule had been issued in December the Council discovered that the expenses must be curtailed, and after some consideration they, without consulting the exhibitors, determined to reduce the number of shows, and to adhere to the scale of prizes advertised in the schedule. The next arrangement was that the shows would all be held, but that 50 per cent. would be deducted from all the prizes awarded. It was stated that the Council had on this occasion consulted the exhibitors, especially the exhibitors of florist flowers. Well, it would be worth while to ask the Council—Who were consulted in this important matter? Mr. James Cutbush of Highgate has already told us he was not, nor were the Auricula growers as represented by Mr. C. Turner, Mr. James, Rev. H. H. Dombrain, and Mr. Douglas. The Council ought to be aware that many of the best amateur exhibitors are not members of any of the Committees, and when such an important alteration is contemplated as reducing the prizes by one-half, all the exhibitors ought to have been consulted. I have no doubt if the Council had issued circulars to the exhibitors inviting them to attend a meeting, and had in a straightforward manner stated the position they were in, they would in a body have rallied round the Council, and the shows of 1875 would have been quite as successful as any ever held by the Society.

What is the effect of the blundering management of the horticultural party on the Council? Simply this, that neither the trade nor amateur exhibitors have any confidence in them. They say the exhibitors had been consulted, and that it was in deference to them that the revised alterations were made, when it is notorious that the exhibitors as a body knew nothing about it. If the Council thought that they could reduce the prizes, or reduce the number of shows within a few days of the dates they were advertised to be held, without having the courtesy to consult the exhibitors about it, the miserable failures of the recent exhibitions must have woefully undeceived them. The fact is the Council is making the Royal Horticultural Society the laughing-stock of all the practical horticulturists of Britain. It is quite evident that they do not understand the purposes for which the Society is maintained, and the time has now come for something to be done by the horticulturists themselves. There are a certain number of Fellows who pay their money for the pleasure they derive from using the gardens as a recreative ground. By all means let them have it; but it is too bad that the funds derived from those who are subscribers because they hope to benefit the cause of practical and scientific horticulture should be spent on the flower beds and grass terraces of the South Kensington Gardens.

The horticultural party ought to leave the Society to its fate, and form a society of their own. They are quite strong enough to do so. If the Defence Committee is still in existence it ought to meet. There is quite as much necessity now as ever there was. They ought to take some definite proposals to the Council, and if the Council will not co-operate with them, they ought to be prepared to carry them out themselves. In all the large provincial towns horticulture is flourishing. In London, which ought to be far in advance of any of them, exhibitions are at a discount. It ought not to be so, nor would it if those who ought to be leaders would take up their rightful position.

Let us hope that as matters are now at the very worst there will be a change for the better. The Fruit and Floral Committees are doing an important work, and the meetings should not be interfered with. The expense of the meetings to the Society is as nothing compared to the benefits which the country derives from them; but the number of shows may very well be reduced. There ought to be a show for Hyacinths and other spring flowers about the middle of March; the next about the last week in April for Auriculas, Cinerarias, Azaleas, forced Rhododendrons, pot Roses, &c.; then the great summer show; an autumn show for Dahlias, Gladiolus, Hollyhocks, Asters, Liliums, &c.; to conclude with a show of Chrysanthemums and fruit in November. Of course the Rose show ought not to be omitted in July, but five, or at most six, shows would be a sufficient number. However, it is no use proposing anything until the Council and exhibitors can work in harmony together.—An Old Exhibitor.

THE ORCHID-HUNTER IN BURMAH.—No. 4.

The next Orchid especially abundant in Pegu is Phalænopsis cornu-cervi. This plant is met with occasionally in Moulmein, but in no part of Burmah does it grow in such quantities as in the Pegu district. It is found on trees surrounding swamps and on solitary shady trees in the forest, and is one of the few Orchids invariably found in the shade. Its leaves and roots are very succulent, making it a bad plant to bring in from the jungle, it being so tender and liable to damage; it is one of the most curious and interesting of the genus Phalænopsis. It derives its characteristic name, cornu-cervi, from the form of the flower stalk, and is commonly called the Stag's-horn Phalænopsis. This stalk invariably grows in the shape of a stag's horn, and the flowers grow out from each of the joints. It flowers very freely, bears enormously large seed pods, and is one of the few sorts of Phalænopsis which strike out young plants from the old flower stalk. The flowers are yellow tinged with green, with straight bars of brownish red across the petals. It is a very easy plant to cultivate, large plants commencing to flower directly they are established. It grows best in a teak-wood basket with broken crocks and moss, and likes the shadiest place in the Orchid house.

This plant should always be sent home by collectors in February. It is then in its driest condition and best fitted for travelling. Special care at this time of year must, of course, be taken in the packing so as to prevent injury from frost on arrival in England. If importers could procure their plants under these conditions there would be no failures, and it would be more common than it is at present, and from its great singularity of character and from the distinctness of its form it would be in great favour with the general cultivator.

Phalænopsis Parishii, the one named after the Rev. Mr. Parish, the great authority on Moulmein Orchids, is also found here growing under the same circumstances as Phalænopsis cornu-cervi. It is a pretty little plant bearing white and purple flowers, and is deciduous like Phalænopsis Lowii, and equally difficult to cultivate. It grows better on a piece of wood than in a basket.

In the open country, on smooth-barked trees, growing in single plants, not in a mass like other Saccolabiums, is found Saccolabium ampullaceum. It bears a number of spikes of very pretty pink flowers, sometimes in good plants quite masses of rosy pink blossoms. It likes plenty of air and light, and is never found in any but the most exposed situations. Its leaves are opposite, short, thick, and blunt, green, generally covered with brown spots on both surfaces. It is from the axil of the leaves that the flowers burst so freely. Growing in great quantities, quite covering the trees in many cases in this district, is found Saccolabium bigibbum, foliage bright green, short, thick, and premorse-flowered, yellowish, a most profuse bloomer, and always found in situations fully exposed to the full influence of the sun. It may be observed of this as of most kindred plants growing under the same circumstances, that the trees they grow on are located in low-lying valleys and swamps where the mists hang in the morning; so that even in the driest weather the plants receive some

nourishment to enable them to withstand the rays of a tropical sun.

In the open country on the trees skirting the fields of Rice luxuriates Saccolabium Blumei. It is no exaggeration to say that this plant is found in thousands. It is quite beautiful to see a tree covered with this epiphyte in flower. It generally flowers during the first break in the rains about July. It is so very well known to all horticulturists that it is unnecessary to enlarge on the form of its flowers, which are white spotted with rosy purple borne on a long raceme. This plant is rare in the forests, which it appears to have forsaken for comparatively civilised haunts, and it is never found in such luxuriance as on the trees by the Rice fields. An explanation of the luxuriance of its growth under these circumstances is very easy. Rice is grown in water, the ground on which it grows being irrigated, so that the ground is under water nearly the whole year, the water being only withdrawn from the fields just before harvest. Thus the epiphytes growing on the trees surrounding the paddy fields are always deriving nourishment from the evaporation continually taking place, and an extraordinary luxuriance of growth is caused by this circumstance.

Aërides Lobbii is found in this district pretty freely scattered. It is, as a rule, found in the forest in less exposed situations than other allied species. It is a charming plant, and grows after the manner of its Indian ally Aërides Fieldingi, bearing long racemes of flowers, very light pink, spotted with dark pink, the labellum being quite pink and of pointed form. In fine plants the flower-stems have a branching habit, throwing-out spikes of flowers along the main flower-stem, which gives it a most graceful appearance.

There are many small Orchids botanically interesting, common to the plains of Pegu, but of little interest to the horticulturist; one of these must, however, be excepted—Luisia Psyche. This plant, unlike all other forms of the genus Luisia, bears the most charming flowers. The plant is epiphytal caulescent, growing perfectly erect, with terete rigid leaves, bearing in their axis its beautiful flowers, light yellow, with fine rich purple labellum of velvety texture.

This is undoubtedly the most remarkable of all the Burmese Orchids. The flower looks more like an insect than a blossom, and the form of the labellum is most striking. Luisia Psyche is easy of culture, growing well on a block. It is accustomed in its natural habitat to the full blaze of a tropical sun, and is found on trees growing on dry ground, where no other Orchids, except its allies, are found growing.—E. S. B.

ROYAL BOTANIC SOCIETY.

The second show of the season was held yesterday, the weather being genial and pleasant both for plants and visitors. The exhibition was a very good and attractive one—indeed, the best metropolitan display of the year. We are only enabled to give a cursory review, omitting the awards, which were not completed when we had to leave the corridor.

In the class for twelve stove and greenhouse plants Mr. Ward, gardener to F. P. Wilkins, Esq., and Mr. Wheeler, gardener to Sir F. H. Goldsmid, Bart., both staged excellent collections.

For twelve Rhododendrons (nurserymen), Messrs. H. Lane and Son had excellently-bloomed large plants, Mr. Cutbush staging small compact plants in good condition.

For nine Roses (nurserymen), Mr. C. Turner staged really fine examples, also a good miscellaneous collection. In the class for six Heaths compact and healthy plants were staged by Mr. Wheeler and Mr. Ward.

For six Azaleas (nurserymen), Mr. C. Turner had splendid large plants; Messrs. Cutbush & Son small but healthy plants. Messrs. H. Lane & Son and Dobson & Sons also exhibited good collections. In the corresponding class for amateurs Mr. G. Wheeler, gardener to Sir F. H. Goldsmid, had massively bloomed specimens. Mr. James also contributed nice plants.

For nine Cinerarias Mr. James and Messrs. Dobson & Son staged good collections. The class for hardy plants was occupied by a beautiful lot from Mr. Parker, Tooting, and Mr. Wheeler.

In the class for six stove and greenhouse plants (Orchids excluded), Mr. Ward and Mr. Wheeler staged effective groups.

For six pots of Mignonette, Mr. Barnes staged beautiful pyramids. Mr. Toms also competed. Mr. Harborough staged a gay collection of Amaryllis.

Amongst new plants Mr. Bull exhibited remarkable plants of Typhonium Brownii, Amorphophallus campanulatus, Dracontium asperum, and several Dracænas. Messrs. E. G. Henderson sent Pelargoniums Happy Thoughts, Distinction, and Comte de Gomer, Daisies, Pansies, Primulas, &c., also standard plants of the beautiful Lithospermum fruticosum, and double Cinerarias.

Mr. Turner exhibited a hybrid Rhododendron, Countess of Dudley, a beautiful white sweet-scented variety of great excellence. Hybrid Azaleas from Mr. Carmichael were effective; Royalty being very fine, and Mr. and Mrs. Carmichael, of the Amœna type, distinct and good.

For the prizes offered by the Metropolitan Floral Society for Auriculas there was a gratifying response, the Rev. H. H. Dombrain, Mr. Douglas, Mr. Turner, and Mr. James staging plants bright, fresh, and beautiful, many of them possessing high merit—creditable to the cultivators and encouraging to the Society. Mr. Turner and Mr. Douglas also staged good miscellaneous collections. Mr. Douglas also sent a splendid basket of finely-grown Primula cortusoides amœna.

Cut Roses were sent by Mr. W. Paul, and a basket of plants of the beautiful globular Rose Peach Blossom. The cut Roses also from Mr. Walker, Thame, were very superior. Messrs. Carter & Co. exhibited their new Coleus Duchess of Edinburgh—a distinct and beautiful variety. The same firm sent variegated Musk; and Mr. Hooper, Bath, a box of very good Pansies.

Messrs. Veitch & Son, Mr. B. S. Williams, Mr. Bull, and Messrs. Cutbush & Son staged highly attractive miscellaneous groups of plants.

BEDDING GERANIUMS.

I can quite confirm what is said by "C. P. P." on page 289 as to the secondary place Mrs. Pollock must now occupy amongst Golden Tricolors for bedding purposes. I find Sophia Cusack, Sophia Dumaresque, Lady Cullum, Sir R. Napier, and William Sanday all superior to Mrs. Pollock, being equal in growth, but more bright and lasting in colour. As Silver Tricolors I find Italia Unita and Charming Bride admirable for bedding in an exposed situation.

I do not recollect ever seeing any mention of Souvenir de Sir J. Paxton as a pink-flowering bedding variety. I find it very superior, being of good colour, free yet short growth, stout in the stalk, and its trusses lasting in perfection a long time. I believe it was raised at the Crystal Palace by Mr. Gordon.—J. Rogers, *Langton Hall.*

AQUILEGIA GLANDULOSA.

This beautiful Columbine is a plant which only requires to be once seen in something like perfection in order to be ever afterwards regarded as one of the finest hardy herbaceous plants we have. Why it is not more generally grown is probably owing to the fact that it is regarded as being more difficult to cultivate than it really is. In heavy clayey soils it will not grow, nor will it survive the winter in damp low-lying situations, even though the soil be of a lighter description. In such places it must be treated as an alpine plant, and be grown either on a rockery or in a prepared border; and what it seems best to thrive in is a mixture of sandy loam and peat, in which it grows almost as freely as any of the genus. The sepals of the flowers are of a deep bright blue, and the petals of a light cream colour; and a well-grown plant bearing a profusion of flowers, which are usually from 1½ to 2 inches in diameter, is an object not easily passed by.

There is a variety which was sent out many years ago by Mr. Grigor of Forres, the well-known writer on arboriculture. It is more robust, larger in all its parts, the flowers sometimes measuring as much as 4 inches across, and the petals nearly pure white with a blue spot near the bottom of each.

The best mode of propagation is by seeds, which should be sown whenever they are ripe; and though few if any of the seedlings will come up before the following spring, most of them will then do so.—R. D. Taylor.

PEARS.

Having given much attention to the cultivation of Pears, and having tried every system of growth and training, on Quince and free stock, pyramid, espalier, and cordon oblique, I entirely endorse the opinion of Mr. Lea as to the capriciousness, uncertainty, and variableness of almost every variety of this fruit. Like him I fruit annually sixty varieties (indeed, nearer seventy), and find those sorts named by him in the Journal of the 15th keep the best, though many years Knight's Monarch may be added to these; and as late cooking Pears, Léon le Clerc de Laval and Beurré de Printemps.

Mr. Lea says he "cannot find Fondante du Comice on any list." He may see it in the catalogue of Monsieur Dauvesse of Orleans of the year 1865. I have no later. It is there described as first quality, ripe in October. He will also see Fondante des Charneuses, a Pear there called "*de toute premiere*

qualité." I have grown it for some years on Quince against a south wall, but it has never been more than second-rate with me, and I should never assign it a high place in my collection, for I find it vastly inferior to Beurré Superfin, Beurré Lucratif, and Doyenné Boussoch as an autumn Pear. Your correspondent does not say when it ripens with him or whether it keeps. In France it is ripe usually the latter end of October, with me a little later.—H. S. S.

CONVOLVULUS MAJOR.

This Convolvulus, or Morning Glory, represents a family of beautiful summer-flowering plants, and has long been popular as a garden twiner; yet it is not cultivated nearly so extensively as formerly, being omitted from sundry gardens which it once so well adorned. Plants of dwarfer growth and compact habit have of late years received the lion's share of attention by floral caterers, while many an old garden favourite has almost been denied official recognition. A plant like this can, however, always hold its head above mere fashion, and will cling to British homes from generation to generation. It will, too, always find friends to welcome it, not because it will "go" well with something else, or that it is adapted to any particular style of the times, but because of its inherent grace and intrinsic beauty. For variety of colours, their extreme richness and refined delicacy, as well as the fine bold shape of its flowers, the friends of our childhood—the climbing Convolvulus, yields in real attractiveness to few summer-blooming garden plants.

Fig. 81.—Convolvulus major.

The popular name, Morning Glory, is very expressive, the splendid flowers unfolding their beauties to the first rays of the sun, and as then seen, with the dew glistening on their polished surface, they are, indeed, at that time a glory of the garden. Their beauty is, however, not lasting, as the blooms close against the fiercer rays of mid-day splendour and the appositeness of the name becomes more distinct.

But these fine blooms are not only the glory of the garden, but are also the glory of the breakfast table. Fresh gatherings every morning loosely grouped in vases are a charming accessory to the first family gathering, and will add an additional ray of cheerfulness to the cheery morning meal. The contrast of colour with the spotless linen ground, the classical shape of their flowers, and their striking individual beauty combine to render their grouping highly attractive, and for this particular purpose no flowers can surpass them. And how beautiful they are in the garden for training up string by walls, for covering trellis work, for forming floral arcades and festooning, to pile up in bold pyramids formed of string or stakes, for balcony trailers, and for window-box culture, to be fringed round the windows! In all these forms they are most ornamental, and to which they are specially adapted.

These reminders are necessary, for we would not have these common flowers forgotten, or their adaptability to such modes of ornamentation overlooked. Their possession is, furthermore, of the simplest, the only outlay required being for a packet of seed; and their culture is of the easiest, as they only require deep rich soil and a liberal supply of water to grow them to perfection.

But must not the seed be raised in pots, and the plants be hardened-off and planted-out? That is a very natural question which may arise after reading instructions on the point. The reply is the instructions are right, but they need in no way deter those who have neither pots or glass from having Convolvuluses. Plants may be prepared in that way by those who have the means, but much greater harm than good is generally done by the adoption of that practice. They are grown under glass and are drawn, they are put out and are checked, the sun burns the delicate leaders, the snails do the rest, and the growing of Convolvuluses is given up. No plants require nicer care in preparing under glass than these, and it is only when the work is intelligently done that success follows.

The old plan, and it is a safe one, is to sow them outdoors, if possible where they are intended to bloom. This must not be done early. The young plants are tender, and must have no checks by cold. Consider them as French Beans, and keep the seed in the papers until the soil and the weather is warm. The last days of April or the first week in May is the time to sow the seed.

A free, quick, unchecked growth at the beginning is the main point to aim at. To secure this let the surface-soil be rich and light; 6 inches of pure leaf mould is the best of all mediums in which to sow the seed. The plants in that grow quickly, and yet are strong. Beneath the leaf mould must be a good depth of richer soil to afford the necessary sustenance. This and copious waterings in hot weather will carry the plants to perfection. With this simple care it is surprising how rapidly the plants grow. Seed sown in May in these prepared sites will soon leave the plants behind which had been sown early and coddled under glass previously to being planted-out. When sown in a bed of leaf mould young plants may be removed from one part of the garden to another when they are 2 or 3 inches high. They must be preserved from slugs.—W.

RHUBARB CULTURE.

Seeing the reply to J. Heed's question about Rhubarb, I may mention that I have a variety which we always call Peach Rhubarb, owing to its having a distinct flavour of ripe Peaches when cooked. I do not know what the real name of it may be. It is a strong-growing late sort, and when forced in the dark has creamy white stalks spotted with pink: it is only in this condition that it retains its fruity flavour. If grown in the open air and allowed to become green it tastes pretty much like ordinary Rhubarb; and this reminds me how few there are who make the most of this delicious fruit-vegetable.

Everyone cannot have Grapes and Peaches in winter nor fruit tarts in spring and summer, but all who have a few yards of ground can obtain that which is, when properly managed,

a delicious substitute for them. At Christmas, when Apples have become scarce and tasteless—when hothouse fruit is only obtainable by a few—when Currant, Gooseberry, and Raspberry bushes are bare—it is no slight blessing to be provided with an easily cultivated vegetable which to a certain extent supplies their places and is within the reach of almost all. How fresh and tempting the bright crimson stalks of Rhubarb look! and how refreshing and grateful is its pleasant acid flavour! At that season of the year I confess I have a special weakness for it, a weakness which appears to be shared by all my family, even by the children, for children as a rule do not like Rhubarb; I suppose it is because few of them have it at the proper time, or if they do it is not properly grown, and not used while fresh and crisp. I remember when I was a boy at school the intense disgust with which I used to herald the arrival of the great heavy-crusted green Rhubarb pies in early summer—for we rarely saw them before the late outdoor sorts had come in—stringy, and tough, and sour as vinegar. This is not the time nor the way to have Rhubarb: in this state it competes very disadvantageously with green Gooseberry tarts and Cherry pies; the one just over, the other looming large before. Cherry pie! How can a schoolboy reflect on such dainties, and then be expected to recur with satisfaction to his mean dish of Rhubarb? No: the time to pasture on Rhubarb is from Christmas to green Gooseberry time, and then only occasionally afterwards by way of a change, or in the shape of jam when other fruit is scarce in autumn.

I read with interest the discussion about forcing Rhubarb in the Journal a few weeks since. I must say I think the simplest and most economical way is to take it up, and either plant it in boxes to be placed in a warm dark corner, or out in a bed over heating materials. The way we manage is this: In the shed which covers the fireplace of the forcing house we have a bed of earth about 6 feet long, 3 wide, and 2 deep; this, having a fire constantly burning under it during the winter, keeps quite warm. In this bed the roots are planted out about every three weeks as we want them, and thus a constant supply is kept up. But small roots or pieces will not do; you must have great strong stools weighing about a stone, and put them in just as they are without dividing. Three or four such roots at a time will be enough for a small family, for it is wonderful what a quantity they will produce, and good too. I should by no means call it seconds, but you must not water too freely, or the flavour will not be so good.

After the crop is pulled take up the stools, divide and plant out. We keep up a succession in this way until the outdoor crops are ready. These are grown under pots simply without any covering of fermenting dung. It may be fancy, but I always think that Rhubarb is never so sweet when it has been grown covered down with manure. Somehow or other the flavour of the stables seems to creep in, and when this is the case it is spoiled. I fancy, too, the sun heat on the pots, which in bright weather become very warm, improves the quality. As to pots versus wooden boxes, give me pots. They can be kept cleaner, for there are no crevices; they want no painting, do not crack with the sun or rot at the bottom with the wet; and as to lasting, well, if you do not break them (and why should you?) they will last as long as you do.

"Rhubarb jam is very nice," one of my youngsters remarks, and so it is. You may make it all sorts of colours and all sorts of flavours according to how it has been grown; and if you like to add a few stalks to your Strawberry jam in July you will find it an improvement. You will not taste the Rhubarb, but it will take away the mawkiness which Strawberry jam has as a rule, and impart a slight acidity, besides improving the consistency of the preserve. I know nothing of Rhubarb wine, but have heard that it is good also.—R. W. Beachey.

THE DOUBLE YELLOW WALLFLOWER.

This is a sweet and bright plant for conservatory decoration during the early spring months. There is no better time than the present to propagate plants for next year's blooming. Commonly slips are put in under handlights in June or July, but that is too late to produce stout plants the same season. Neither are old plants suitable for growing in pots, as, besides being leggy and straggling in habit, the spikes and flowers are smaller than those produced by young plants. I have found the following plan the best in preparing plants for forcing. It is as simple as it is effective. Take off the tops of the young shoots and strike in heat after the manner of Verbenas. When struck pinch-out the tops and place the cutting pots in a cold frame. Here let the plants break into fresh growth, and then plant them out in a very exposed place. They do not require rich soil, but they must be planted very thinly. They may have one more stopping after being planted out. By the autumn they will be fine bushy plants for potting, the foliage curling over the pots, and the spikes they throw-up will be stout and bold. In a very light house and gentle forcing they give a fine effect in March and April. For out-door flowering this and other double varieties can be raised in the same way, and the plants are much finer than those raised by slips in the middle of summer.—W. J.

THE FLOWER GARDEN.—No. 2.

The one great fault of beginners in the arrangement of flowers is that of aiming too high in the first instance, instead of feeling the way with one or two simple matters—making a study of every combination, and then gradually extending our measures with the confidence and security of success which experience alone can impart. We too often launch out boldly, spreading the brightest colours with a lavish hand, and with very little regard to harmony of colour or congruity of position. The beds look bright and gay, and we regard them with a certain amount of complacency mingled, it must be owned, with doubts as to what those who are competent to criticise will think of our work. The feeling is natural, because it arises from a conviction of ignorance of all fundamental rules of taste; or it may be caused by the fact of our having copied some design which looked well enough in a large public garden but is totally unsuited for our small one.

While strongly advocating the importance of a knowledge of the laws of colour I would not advise a slavish following of set rules, or attempt to frame arbitrary laws for anyone; for it must never be forgotten that tastes differ, and that colour combinations of a quiet refined tone are not the most attractive in the eyes of everyone. One sees gardens that are perfectly dazzling in their brilliancy, and with which the owners are evidently quite satisfied. Well, if they are content why should we seek to mar their enjoyment of what they consider to be beauty? Certainly we will avoid doing so, but at the same time we must not pander to a depraved taste, which a fondness for glare and glitter really is.

There is a very close analogy in harmony of colour and of music. We take a certain colour and place it with others which we know will impart and receive much additional beauty from such a combination. The musical professor in associating notes of different tone produces harmony to song. The greater the master the more varied and delightful is the music. Those who are proficient in music can read a simple tune at sight, but it requires high culture, refined taste, and a natural aptitude to take in the full significance of the great works of Handel, Mendelssohn, or Rossini. Just so is it in colour. A few simple combinations are seen, copied, and become popular; but the more difficult designs find few copyists because they are seen to be intricate and therefore difficult, and few attempts are made to study and master their details. The exquisite delicacy and loveliness of the various tints when thus interwoven remain invisible to casual observers, and herein, I think, is found one reason for occasional sweeping condemnations of our bedding system.

Turning to the practical part of the subject, I will take for my first example a flower border of an ordinary type and see what can be done with it. Perhaps the most common form is that of a parallelogram placed immediately in front of a belt of shrubs with a sweep of lawn in front of it, and no better position could be required for the display of an attractive floral picture. If the roots of the shrubs must be prevented penetrating the flower border, this is easily done by making a deep open trench between the border and the shrubs, so that the roots cannot cross over.

An easy method of arrangement is that of straight lines or ribbons, and hence the familiar term of "ribbon borders." The plan is so simple that it admits of an almost endless combination of colour. The lines, however, should not be taken straight through and each finish at the end abruptly, but each row should curve backwards, giving a rounded finish to the ends of the border. By this simple and easily understood arrangement the effect will be much more smooth and pleasing than if such row of plants is carried straight through, as is too often the case in planting a border. In the examples of planting the lowest numerals represent the lowest-growing plants, commencing, of course, at the front of each border

and increasing in height towards the back, finishing with the highest as the back row.

A.

6, Rich Yellow — Golden Superb Nosegay Geranium. Flowers kept picked off.
5, Deep Crimson—Coleus Verschaffeltii.
4, Grey—Leucophyton Brownii.
3, Blue—Lobelia Blue Beauty.
2, Carmine—Alternanthera amœna.
1, Pale Yellow—Mesembryanthemum cordifolium variegatum.

B.

6, Purplish Red—Canna rubra superbissima.
5, Pale Yellow—Lady Plymouth Geranium.
4, Dark Blue—Viola Perfection.
3, Crimson—Coleus Verschaffeltii.
2, Lilac—Lobelia Omen.
1, Grey—Santolina incana.

C.

6, Purplish Crimson—Ricinus purpureus major.
5, Grey — Leucophyton Brownii. Not pinched, but left to grow tall.
4, Pale Yellow and Green—Polemonium cœruleum variegatum.
3, Blue—Lobelia Lustrous.
2, Bright Crimson—Coleus Verschaffeltii splendens.
1, Yellow, Pink, and Green—Golden Tricolor Geranium Peter Grieve. Flowers kept picked off.

D.

6, Deep Rich Scarlet—Lobelia Queen Victoria.
5, Pale Yellow—Polemonium cœruleum variegatum.
4, Blue—Lobelia speciosa.
3, Yellow—Golden Feather Pyrethrum.
2, Blue—Lobelia speciosa.
1, Grey—Cerastium tomentosum.

E.

6, Various—Mixed Gladioli.
5, Pale Yellow—Vinca major elegantissima.
4, Blue—Viola Perfection.
3, Green—Tagetes signata pumila. Flowers kept picked off.
2, White—Euonymus radicans variegatus.
1, Green and Black — Sempervivum californicum.

In the three examples A, B, C, it will be seen that with the exception of the Lobelia and Viola the plants are all of kinds that are valued solely for their foliage and not for their flowers, so that there could be no doubt about their continuing in full beauty throughout the season. The Viola and Lobelia are both safe plants, but the introduction of other plants into the design for the effect of their bloasom requires caution, for the evident reason that the failure of a single line would spoil the appearance of the whole. D and E comprise two useful arrangements for amateurs, the Lobelia, Golden Pyrethrum, and Tagetes being easily raised from seed ; the scarlet Lobelia and Polemoninm wintered in a cold frame or pit; the Gladioli stored during winter in a drawer or upon shelves and planted in April; and the Sempervivum, Euonymus, and Vinca being perfectly hardy.—Edward Luckhurst.

THE PINE-APPLE NURSERY.

It is a well-known axiom that we cannot put an old head on young shoulders, but it is within the bounds of possibility that a youug head may be put on old shoulders, as is exemplified in this establishment. It is old in years, yet young in vigour; and if a tone of matured age pervades it, not less certainly does it partake of the buoyancy of youth where enterprise and life are its prominent characteristics. In a word, in the brisk competitive race of the times this nursery is not likely to lag behind in its aims to hold a place abreast of its contemporaries. This is no ordinary position to attain, and it can only be accomplished by a combination of practical skill in home management and the business activity which is essential to make its resources familiar to the outside world. On these principles are founded the success of the most successful examples of the day, and on these lines are based the governing medium by which this nursery sustains its claims to a foremost place in commercial horticulture.

Being situated in a pleasant part of the metropolis, and not devoid of outside attractions, it is not to be wondered at that a considerable sprinkling of rank and fashion daily make a rendezvous of its spacious conservatory, which at all times is worthy of a visit, and especially now it is at or near its zenith of beauty. This structure is exceedingly gay, so gay indeed that one can with difficulty take hold of a given point to commence a description. Therefore, no detailed notice is attempted, but we, in a general way, class it as it is—a grand mass of colour and foliage, blended in a way to command attention, yet almost to defy analysis. The colour, however, is mainly imparted by Azaleas, of which a central plant of A. Leeana is conspicuous, surrounded with a margin of Triteleia uniflora and Lycopods. This is the original plant of this old and good Azalea, which is white with occasional pink flakes, the flowers of good form, and free. As a fine contrast is the darkest and best of the purple Azaleas, Cedo Nulli. A light variety, effective by its bold flowers, is A. Nonpariel, and one of the best of the darks is A. Superba. This is a rich orange scarlet, as free and with flowers as good in form as are those of A. Roi Leopold. The following varieties were also effective:—A. grandis, fine; Grosefürstin Helene, Eugène Mazel, and President. Several Ghent or Chinese Azaleas added their soft yet distinct colours; a plant of the typical variety, A. sinensis, being exceedingly well bloomed.

At the entrance is an excellent specimen of Erica (aristata) Victoria, and a match plant of Aphelexis, both well covered with flowers. Several plants of Amaryllis are interspersed, the best being A. Harrisonii, a pure white ground with maroon stripes ; A. aulica splendens, fiery scarlet ; and the showy A. vittata rubra. Early Pelargoniums, Digby Grande and Monte Christo, proved their usefulness for conservatory decoration in April. The rest of the flowering plants comprise Hydrangeas and Cytisus, with marginal plants of Stocks, Mignonette, Isolepis, and Lycopodiums, to add sweetness and quietness to the brightness of the collection.

The foliage plants consist of Yuccas quadricolor and oleifolia, Cordylines, Palms, and Ferns, not overlooking sundry plants of the Variegated Maple, Acer negundo variegata. These plants are in various sizes, and are admirable for lighting up dark corners and in showing to advantage in grouping in contiguity to masses of dark foliage. For this purpose this common and easily-grown light-foliaged plant is strikingly effective, and should be generally used for decorative purposes during the spring months. On the north side of the edifice a cool and agreeable change is afforded by the rockery where Ferns and Ivy luxuriate in a semi-natural state ; the Dicksonias especially growing with exceptional vigour.

The remainder of the glass structures, which are numerous, are filled with a general collection of plants, mostly of a handy portable size, and in excellent order. Not many large specimens are to be seen, yet we noticed good Alocacias, an excellent form of Anthurium Scherzerianum large in size and rich in colour, Musa ensete, Curculigo recurvata, a nice stock of the useful Palms Plectocoma Andersonii and Cocus Weddelliana, good Gleichenias, &c. It is not, however, for a few large specimens, but for immense stocks of medium-sized and small plants that the nursery is noticeable. Dracænas, Eucharis, Gardenias, Heaths, Pelargoniums, &c., are provided in thousands to meet the running demand on decorative plants of this nature.

Altogether the nursery is worthy a visit alike to the pleasure-seeker looking for a fine floral display, and to the gardener who is as much interested to see work in progress as when perfected and completed. Mr. Beater's supervision cannot fail to be appreciated alike by the Company and the public.

LITHOSPERMUM PROSTRATUM.

As spring-flowering border plants are now being sought after, this beautiful hardy evergreen trailer is recommended as worthy of culture. Although the habit of the plant is procumbent, it is still compact, and a good plant a foot high and through when clothed with its deep blue flowers is exceedingly attractive. It will grow in ordinary garden soil, but has a preference for an admixture of peat. It is a native of France, but is quite hardy. The colour of the flowers is very rich, and show to advantage in the bright green setting of the foliage. As a pot plant it is very attractive at this season of the year; indeed in the collections of hardy plants staged at South Kensington last week, no plant was more distinct and effective than this lowly yet lively Lithospermum. It is increased by cuttings; young shoots put in at the present time in gentle heat will strike readily, and will make nice plants by the end of the season. It may also be raised by seed. It is useful for the rockery, for associating with Iberis and other low-growing spring-flowering plants, and as a pot plant in the front row of the greenhouse or conservatory. It is not a gaudy, but is an interesting little plant, possessing inherent beauty, and has claims to extended cultivation.—W.

Fruit Prospects in Lincolnshire.—A nice change in the weather has set in; but bright sunny days are followed by frosty nights. On the 14th ult. the thermometer stood at 20° at 6 A.M., and before 12 o'clock the mercury had risen to 60° —a rise of 40° in less than six hours. Fruit trees are densely clothed with blossom. Pears and Plums are well open; so far

they are not injured, and there is every prospect of an abundant crop of fruit.—G. R. Allis.

PEACH FORCING.—No. 3.

Planting.—It has already been stated that the trees for house planting ought to be of fruiting size, and planted in their stations as early in autumn as the state of the growth permits, which is when the leaves begin to fall. If a few leaves remain at planting there is no harm, if the wood be ripe and the buds prominent. As the trees, however, will not be available for early forcing the first season there is no need to be in a hurry in planting, the leaves may be all fallen, though when moved with a few leaves there is a prospect of adventitious roots being formed by the descending current of sap, which gives an advantage to such trees over those moved in a decidedly dormant state. In planting, allowance must be made for the lowering of the soil, which will settle to a greater or lesser extent according to the lightness or firmness of its nature; even if the border be made as hard as possible it will sink, and this I have known to vary from 6 to 9 inches. In any case the trees should be planted high—at least 6 inches above the present level, the setting-on of the roots being that height above the level of the border, which will be equal to planting the trees on a slight mound; and this ought to be continued some distance outwards from the stem, so that the mound will scarcely be apparent. This may seem a small matter, and yet it is one which unattended to renders surface-dressings impracticable, as these only sink the stems lower in the soil when the trees are planted with the setting-on of the roots level with the border; and yet surface-dressings are very important, and equally so is the keeping of the stem of the trees from being buried deeper than they were at planting. The burying of the stem is preventive of successful culture and healthy trees, as a multitude of suckers are sent up from the roots, and the growths of trees become weak and die back. Avoid deep planting and low planting, and spread out the roots near the surface, and make the soil firm about them. It is useless to rectify any evils of planting in after years. Forced Peaches do not lift as readily as outdoor trees, and require no check after they are once forced, but rather need encouragement by judiciously applied artificial stimulants and support.

In planting, the space to be allotted to each tree will necessarily have to be considered. It is remarkable what a large space a Peach tree will cover, but then some time must elapse before it does so. I am not an advocate of monster trees, though where they exist by all means retain them, but do not plant with a view to them, unless prepared to have lost space for a number of years. Moderate-sized trees are in every way as good as large ones, and there is an advantage in the allotted space being covered in a shorter time. The width of the trellis will have much to do with the distance of the trees; 15 feet apart is ample for a trellis 12 feet in width, 18 feet for a 10-feet trellis, and 3 feet increased distance for every 18 inches decrease in width of trellis. Those are the distances I consider most desirable, but as the trees have in their horizontal parts—the lower parts of the trellis—a tendency to grow less and weakly, I do not advise increasing the distance, as that would be to extend the horizontal surface, but on the other hand I would lessen it if any departure were made from the distance named.

After planting, the trees should be thoroughly watered, and during the period of rest the border should be kept in a moist condition. It is a mistake to think trees in a dormant state require a "dry as dust" state of the soil; nothing of the kind have they in nature, and in practice it is undesirable, as it often causes the buds to be cast when they are expected to expand into flower. Not that the soil requires to be saturated to soddenness, but to be kept in a moist state, and this will be the case if the lights are removed when the trees are at rest, or the borders partly within and partly outside. If entirely within they should be occasionally examined, and watered.

Preparing for Forcing.—When the leaves have all fallen the trees should be loosened from the trellis, the woodwork be thoroughly cleansed with soap and water, and the glass with water only. If the house requires painting it ought to be done as well, or any required repairs, the structure being thoroughly scrutinised and be put into good order. The trees will next require to be pruned, and this done they should have every part dressed with tobacco juice, adding to every gallon 1 lb. of soft soap. This will destroy the red spider and the brown or Peach aphis, which is troublesome upon the wood of Peach trees in a dormant state and in the early stages of growth. The brown scale is not an unfrequent infestor of Peach trees under glass. It may be destroyed by adding to the above admixture of soft soap and tobacco juice two wineglassfuls of spirits of turpentine. In either case the composition is best applied at a temperature of between 90° and 120°, and to be effectual it requires to be thoroughly applied, not putting it on the face of the branches and shoots only, but on the back as well as the front, every part being thoroughly wetted, angles as well as smooth parts, but at the same time being careful not to dislocate or injure the buds by too heavy brushing, and especially in a downward direction. A stiff brush is not suitable, but what would be considered a good tool by a painter answers perfectly.

Tying of the trees will need to be done neatly, and loosely rather than tight, and the matting twisted once round the wire, which will not allow of the shoot being displaced, and at the same time will keep the wood from coming in contact with the wire. The border if it have a hard caked surface should be loosened very lightly with a fork, not disturbing any roots. See that the soil is closed to the walls, the front wall being arched make the soil close up to their crown, and have all fine on the surface. Top-dress with 2 inches thickness of equal parts turfy loam and short manure, completing, if the lights are not to be removed, with a thorough watering to the inside border, which will be sufficient to keep the trees in a moist state at the roots until forcing is commenced; if the lights are removed the watering will be unnecessary, and yet any parts not likely to be reached by rains should be thoroughly watered.—G. Abbey.

PRIMULA ACAULIS AND ITS VARIETIES.

Why people do not take the trouble (for it consists in nothing else) of obtaining the beautiful varieties of this plant I cannot understand. Surely Primula japonica and P. cortusoides amœna, to say nothing of P. denticulata, P. verticillata, &c., undeservedly in comparison have so much more care bestowed on them, in consequence, I presume, of their greater scarceness and novelty, and also, perhaps, because of the labyrinth of rubbish in which the beautiful kinds of Primula acaulis are unfortunately involved, due to the extravagant amount of tints to which the flower is subject by seed. All blossoms with washy and indistinct colours should be at once discarded, and those with decided, and more especially clear and bright shades, should separately be selected, and having been propagated in sufficient quantity for massing they would display their beauty to advantage, varying in shades of crimson, yellow, purple and white. Thus, what a choice the single and exquisite double-flowering Primula acaulis offers us. The latter more intrinsically beautiful, but wanting, for the most part, greater nicety of treatment, whilst the former positively require little or no attention, and yield a greater diversity of hue, affording also a wider interest by increasing themselves from seed, and thus more perfect varieties still may be rightly expected.

A bed of nearly three hundred plants of Primula acaulis purpurea in my garden has been a mass of colour since the end of February. What an effect could be produced by other beds massed in the same way with other distinct shades.

The common yellow Primrose varying in its wild state but little in colour, may often be found differing in form, some having more, some less, lobes to the corolla, the edge of which may be either notched or smooth, occasionally forming an almost unbroken circle, which strain is much to be desired. In this case the lobes partly overlap each other, giving apparently more substance to the flower.

As a pot plant for the greenhouse (for which purpose I think it is as well taken from the open border when required with a tolerable amount of earth clinging to its roots), it blooms without artificial heat some weeks earlier than when unprotected. I think nothing can be more attractive. Whilst out of doors, whether under the shade of trees or in the open ground, it literally hides its foliage with blossoms, forming as it were a cushion of nearly every shade of colour.

Primula elatior is so nearly allied to Primula acaulis that I have known their seedlings sometimes partake of both forms. The Oxlip in its natural state I can vouch for as growing in many a Suffolk wood, and produces somewhat the effect of a cluster of Primroses issuing from a Cowslip stalk.

The Polyanthus, more especially valued for its beautiful lacings and minute pencillings, will always claim its special

admirers. It has to my knowledge but few of its class with decided and attractive colours as yet. I contend, in conclusion, it is the harbouring of inferior varieties, mostly nondescript in colour, which tends to create a heterogeneous strain, thus degenerating instead of improving this beautiful class of flowers, and rendering it a plant of second-rate favour.—Henry W. Cooper, *Surrey*.

CHILIAN BEET FOR WINTER DECORATION.

A bad strain of this decorative plant is one of the most rubbishy impediments that a garden can be troubled with. The worst of it is, its badness is not proved until the plants have attained a good size, and the blanks left by pulling them up are not easy to fill up satisfactorily. But a good strain is decidedly ornamental, its massive foliage, high colour, and bold growth adding an agreeable diversity to the general effect. Unfortunately, however, in good strains are bad plants, and, if planted in a row, to take these away leaves ugly gaps, and to allow them to remain is to cultivate unsightly mongrels. It is quite likely that this inconstancy may drive this Beet out of our gardens, and its use be lost for that purpose for which it is really useful. My practice in growing has never been to rely on it as a summer garden plant, but it has served me well as a winter and spring ornament both in conservatory and hall.

For this purpose I grow a batch in any convenient part of the kitchen garden, and keep weeding out the worst as they show their character, and in the end have generally a dozen or two left of really brilliant colours. These are potted up in the autumn and kept in pits from frost, and introduced as required for associating with flowering plants both under glass and for grouping in corridors and on staircases. Thus used on special occasions they have saved the life of many a Dracæna, and have created an effect, by gaslight especially, that few, if any, tropical plants could equal.

For mixing with plants of Centaurea, a few Chrysanthemums, or Primulas, high-coloured plants of this Beet are really useful in the depth of winter where more tender plants could not be placed without great anxiety. I can recommend it for that purpose, because I have proved its worth, and have witnessed how satisfactory it has been to those for whose gratification the groups of plants have been arranged. More than once it has been a sad puzzle as to what the brilliant-coloured plants could be which looked so tender yet were so hardy as to be placed in all sorts of draughty positions without care or compunction.

To those who are called upon to furnish ornamental groupings in winter, and whose resources are greater for killing tender plants than for raising them, I advise a trial of selected plants of Chilian Beet. Sow the seed in the open garden about the first week in May, and transplant in any convenient place in which to prove and select the best. Pot up in October, and when established give them a little liquid manure to enhance the colour of the foliage. The plants are never more effective than when bolting for bloom in the spring, when the best can be replanted in the garden to ripen their seed.—Anglo-Saxon.

OUR BORDER FLOWERS—THE COLUMBINE.

Perhaps there is no race of plants that affords us more diversity of colour in their flowers than the Columbine. With the exception of a pure scarlet I think they give us all the intermediate shades to be found in flowers. I have seen them in some woodland scenery growing on a gravelly hill in partial shade among the grass and decomposing leaves in their thousands. In such places they are seen to perfection in single, double, and semi-double varieties. They are a race that are easy to manage, for under the above circumstances all they require is just simply to be left alone; they reproduce themselves rapidly from seed when once established. They will grow almost anywhere provided they have light and air. These plants are among the very best for cut flowers, where such are in demand, as affording a continuous supply for a great length of time. There is a variegated form of the Aquilegia vulgaris, and when well established it is a very striking plant as a border flower.

When we turn our attention to the imported varieties we find some of Nature's choicest gems. To have them in perfection they should be grown in beds or groups, selected according to their habits and contrast of colour, yet as single plants in the border few flowers can surpass them. They delight in a moist but not wet soil—that sometimes proves fatal to their well-doing. Sandy fibrous loam and decayed vegetable matter, with a sprinkling of coarse grit well incorporated into the border, form a suitable soil; this should be broken up to the depth of 2 feet, to afford the roots room to develope themselves. The taller kinds should be staked as they advance in growth, to prevent the wind from breaking them. Some of the choicer kinds are well adapted for exhibition purposes. Some of the dwarfer species are splendid plants for the rockery. To keep them true to name they are increased by division when the bloom is past. New varieties are obtained from seed.

Aquilegia arctica is a very fine variety, with blue and white flowers. A. siberica is of compact habit, its large blue and white flowers have a fine effect; it ought to be more extensively grown than it is. A. chrysantha is a novelty of no mean order, its beautiful yellow flowers and graceful habit entitles it to a place in every garden. A. glandulosa is one of the best, it makes a grand display as a border flower. A. alpina is a very choice kind for the rockery or border; it requires shade and moisture. A. olympica is one of the largest-flowering varieties we have, and is well adapted for rockery or border. A. cærulea is a charming variety of dwarf habit; no collection should be without it. A. Skinneri is a dwarf and early-flowering beautiful variety; it is able to hold its own against all comers, and ought to have a place in every collection. Its orange and scarlet-coloured flowers render it a very conspicuous object whenever it is met with in good condition. A. canadensis is very seldom met with; it is said to have been introduced more than two hundred years ago. It is one of the tallest of the race. All the varieties are effective and of easy culture. Their cultivation is strongly recommended.—Veritas.

RECUPERATIVE POWER IN PLANTS.

Thinking the following may be of general interest, I send it, hoping that it may elicit some discussion.

In my garden I have a row of about fifty young Currant bushes, principally Red and White, with here and there a Black. At the beginning of February the sparrows and other birds made a vigorous onslaught on the buds of these said bushes, completely pecking them out, and leaving the branches as smooth and free from buds as if the rods had been individually drawn through the fingers and the buds rubbed off. The Black Currants alone escaped this infliction, probably in consequence of their strong aroma being distasteful to our "feathered friends."

Having noticed the completeness with which the birds had stripped off every bud from the bushes, I was fearful lest the plants themselves should die, or at least suffer very much, and consequently watched with some anxiety to see the turn which things would take. Judge my surprise when, about three weeks after this Promethean infliction, I found that the bushes were again putting forth buds, some in the exact locality of the wound, and others at different portions of the stems.

Now, not only are the bushes clothed with opening leaf buds, but the show of flower buds is also very large, and seems to promise (weather permitting) an abundant crop of fruit.—Selimo Bottone.—(*English Mechanic.*)

[We are enabled to give confirmatory evidence of the vitality of Gooseberry and Currant bushes under the same circumstances. We have, in the case of vigorous trees, observed that where the birds had taken the primary buds a pair of latent or adventitious buds pushed from the base of each. These have produced fruit, but smaller—as the growth was more weakly—than that from the principal buds. We have also frequently noticed that where birds had picked off the tops of Peas when just bursting the ground, that each Pea had sprung two dormant buds from the base of the original growth, which have made weakly haulm and even produced flowers. This is only the case with large Peas sown somewhat late in the season, and when the ground is warm; Peas from small seed from which the tops have been picked early invariably decay. Kidney Beans which have been cut by frost will, if the frozen part is cut over immediately and the downward decay of the stem arrested, push fresh eyes and grow, providing the soil is not too cold and wet; fair crops have been had from Beans so cut down. —Eds.]

NOTES AND GLEANINGS.

At the Fungus Show held in Aberdeen last September, a committee was appointed to organise a Scottish Cryptogamic Botanical Society, and on the 16th inst. a meeting, attended by botanists from various parts of Scotland, was held

at Perth to found the Society. It is purposed to have a show of Fungi, Mosses, Ferns, and other cryptogamic plants every year in various districts of Scotland in rotation. The following office-bearers were elected:—President, Sir T. Moncrieffe, of Moncreiffe, Bart.; Vice-president, Professor Dickie, Aberdeen; Secretary, Dr. Buchan White, F.L.S., Perth; and Treasurer, Rev. J. Stevenson, Glamis.—(*English Mechanic.*)

—— There is an increasing demand for land in Ceylon for the purpose of growing Tea, Cinnamon, Cinchona, Vanilla, and other useful plants for economical purposes, as well as for the spread of the Coffee plantations. A disease in the Coffee plant has lately been discovered which threatens scarcity of this product unless speedily checked. It is called "leaf disease," and, as its name implies, is principally apparent in the dearth of foliage, though the produce of the berries is also considerably reduced. It is believed by competent authorities to be mainly caused by exhaustion, and is in this respect similar to the disease among the Lemon groves of Europe, to which we alluded a week or two ago. The Government of Ceylon have taken up the subject with a view to its thorough investigation.—(*Nature.*)

—— The Acclimatisation Gardens in the Bois de Boulogne, Paris, have received a rare collection of Artificially Coloured Plants from China. The plants are exhibited in the great glass house of the gardens, and excite universal admiration. Among the collection is a dwarf tree of half a metre in height, the trunk of which is as thick as a finger, and the root of which hardly fills the hollow of a man's hand; the specimen is about one hundred years old, and is a species of Oak. This, however, is not a natural phenomenon, but the result of Chinese horticulture, which finds its highest problem in the reduction of the natural size of plants.—(*Nature.*)

—— The "Sanitary Review," a new monthly penny periodical, states that the proposal to form a Public Garden within the district of St. George's in the East has been favourably received by the vestry. A memorial signed by 650 inhabitants, including many of the most influential ratepayers, was presented in favour of forming a public garden at the east end of the parish churchyard, and making a thoroughfare through the churchyard from St. George Street to Cable Street.

NOTES FROM MY GARDEN IN 1874.

ROSES.

So much has been said on the subject of the queen of flowers in the Journal, and so well said, that I fear any little contribution that I may make to it on the subject of Roses in my own garden will not be of much avail. Still, the same principle that has led me to believe that notices from my small plot might be of service to others leads me to add a few remarks to those which I have already made on other subjects.

I have frequently stated that mine is not a good Rose soil; and although it will grow most plants well, those which require, as the Rose does, a tenacious loam, fare but indifferently. In dry seasons this is more especially the case, and what I have suffered from orange fungus I have already detailed to the sympathising Rose lovers of our Journal. Last year happily I did not suffer to the same extent, whether owing to the season or to the fact of having introduced some loam (of rather too sandy a nature, I fear) into the garden, I cannot say; but certain it is my trees did not present the same deplorable appearance they have done for the last two years, while during the winter I have had but very few losses. Some alterations I made will, I hope, add to my enjoyment of the queen of flowers. This year I have made my little rosarium larger, and have planted on my wall, to occupy the spaces until the fruit trees fall in, some of the newer Teas on Mr. Prince's seedling Briar stock.

The two plants about which I am proudest are those of Cloth of Gold and Rêve d'Or, which are now fast covering my house. Of the former I had some truly grand blooms and clusters of blooms, and if it goes on at the same rate for a couple of years longer I shall no longer cast envious eyes at my neighbour Miss Whittles' truly grand tree. As to Rêve d'Or, I do not know where it will stop: it has forced its way right through the open woodwork of the gable, and is creeping round to cover the north side of the house as well. It was this last season clothed with bloom from the base up to the uttermost branches, and I may say that a plant budded from it on to a standard Briar was filled with bloom; so that I cannot understand that anyone has found it to be a shy bloomer. With me it is the most floriferous Rose I have. The plant alluded to above I gave to a friend to cover his vicarage, which I hope it will do; and I know of nothing better for the purpose, for it is nearly if not quite evergreen. A plant which I supposed to be Climbing Devoniensis planted by my yard door has turned out to be Maréchal Niel; and although I do not like the Rose for outdoor decoration, as it hangs its head and displays the decaying outer petals, yet I have been obliged to give it space, and have fixed on the top of the wall a wire netting 4 feet high for it to run along. A Solfaterre on the front of my house has also made rapid growth, so that I shall soon have, I hope, enough of yellow Roses.

There was a time in my select days as a Rose-grower when novelties had their wondrous charm for me. No French dame sallying out to see the "loves" of new bonnets at Longchamps was more eager than I to find out the new Roses that under the description of *magnifique*, *superbe*, *très grand effet*, dazzled one's eyes as each new catalogue appeared. But, alas! experience has cooled one's ardour, and I can look down the longest list of novelties with a sort of icy coldness that contrasts very forcibly with the feverishness of former days; and I am contented to wait until I see their merits or demerits decided elsewhere. And how very few Roses of real merit the past year or two have given to us! I had a small plant of Capitaine Christy; and not only from what I saw then, but from plants I saw at Mr. George Paul's, and from a fine box of blooms exhibited by him at South Kensington, I am inclined to think very favourably of it, my only question being whether it will sufficiently stand weather. Of the other new Roses of last season I had none.

As to sorts I may endorse what my friend Mr. Peach has said, after the careful and elaborate Rose election carried out by Mr. Hinton, for which all lovers of the flower owe him many thanks. It is preposterous to be asking for or giving lists, unless it may be that some peculiarity of soil or situation demands some special kinds. There are some which have a hardier constitution than others, and hence a novice might in a trying locality require some guidance, otherwise for some time to come those lists ought to answer all purposes. I have again added to my stock some on the seedling Briar. But, after all, why should I talk of my stock? I have not more than some six hundred Roses altogether, and these are put into a much smaller space than a true Rose-grower would desire to have them, and I can well imagine the smile of pity which flits across the face of some of my Rose friends as they think of my little lot compared with their magnificent stud. Well, be it so; on the other hand there are many who would like to grow six hundred, and therefore I may well be satisfied. I am not an exhibitor of them, or I should require a vastly larger number. They are now sending forth their dark healthy-looking shoots, and I hope to have much enjoyment of them during the coming season.—D., *Deal.*

STOCKS AND ASTERS.

The season is fast approaching when the seed of these delightful annuals ought to be sown. They are familiar to most people, and, in my opinion, no garden of any pretensions ought to be without them. Stocks and Asters may be called everybody's flowers. They possess so many good qualities. Their sweetness, their various colours, and their adaptability for cut flowers place them high in the ranks of annuals. My object is to simplify their cultivation, as I believe many people are labouring under the impression that unless they possess a hotbed and a frame that it is next to useless to attempt to grow them. In nine cases out of ten they are so produced, and the plants are already in a forward state. I have myself adopted the same mode of raising them, simply because it has been a custom. Those who want early blooms must, of course, sow accordingly; in this case I shall call them summer flowers, but I am of opinion that they are more autumnal than summer flowers. I will here detail my own practice for the last two or three years, which has reduced the labour of raising Stock and Aster seeds to a minimum.

They are grown in the kitchen garden on the side borders of a central walk between 70 and 80 yards long. On these borders are planted standard Roses about 2 feet from the Box edgings. A good dressing of well-rotted manure is every year given, and what is good for the Rose is equally good for the annuals. The borders are nicely levelled with a rake, then a drill is drawn 2 feet from the Box edging, and about 2 inches deep in a line with the Roses; this drill is for Asters. I then

mark out another drill a foot from the first; this is for Stocks. It is important to have the colours varied as much as possible for the sake of contrast. In sowing I proceed as though I were sowing Onion seed, and at the end of each kind I place a label; this keeps each colour separate, and is also convenient to make any notes when they are in bloom. I make it a point to cover the seeds lightly with sifted ashes from a burnt rubbish-heap. It is best sprinkled on by the hand from a flower pot or saucer. Perhaps some may think this is a very rough way, and would prefer to have the borders nicely levelled and raked, but I think I shall be able to show that these drills or trenches are of great importance. Little details are often the secret to success, and these trenches are a provision for watering; if this is not required by the watering pots the drills will better retain Nature's watering. Seed beds are often raised in the centre, and are smoothly levelled; but mark the results of this plan after a smart shower of rain, followed by a parching sun and drying winds. The result is a hard-baked surface, particularly so if the soil is of a strong binding nature. If the weather should continue dry, waterings will be required, but it will be found that through this dry and hard surface the water will not readily penetrate, but will be found to run off, and to make it enter under such circumstances the Dutch hoe or fork tines must be used; but suppose the seeds are germinating they are apt to be rooted-up by the operation. Now, if I had a circular bed to sow I would begin at the centre and make circular drills at a certain distance apart.

The seeds should be thinly sown, I say thinly because Stocks and Aster seeds are too costly to be lavishly sown; indeed, sowing too thickly is often attended with bad results; it is a waste of seed, and the plants are drawn-up thin and weakly. In such cases they ought to be thinned early. Many half-hardy annuals might be raised by placing good-sized inverted flower pots on borders, and sow under them, and after germination gradually inure the plants to the light and sun, but cover at nights if there is frost. The covering will have its advantage by keeping at bay slugs and other enemies until the plants gain sufficient strength to do without any protection. Stocks and Asters, particularly the former, by not sowing too thickly can grow on for some time without injury, indeed until they begin to show their blooms; then is the time to thin—that is, by weeding-out the single flowers.

Snails are particularly fond of Stocks, and the best advice I can give is to catch and kill them. An hour or two after dark they will be found emerging from their abodes to make their night attack, then with a lantern and a flower pot make the sortie on their lines. The first week in May is soon enough to sow the seed. In referring to my diary of last year they were sown on the 16th of May, but that was too late, and it was delayed owing to the dry weather; but by the middle of September they were a grand sight, and at no time of the year are they seen to better advantage, for they last so much longer, and their colours stand much better than in summer. This border is for cut flowers, for we rarely cut any from the flower garden.

Just a word or two about watering. This is a very important question. When watering is necessary let it be done thoroughly. A good watering two or three times a-week is much better than giving dribblets every day. Water should never be allowed to run off in streams. I think that watering is oftener done than is really necessary; for that reason I avoid watering as long as possible, for when once begun it must be continued.

Those who have neither hotbed or frame need not be deterred from sowing half-hardy annuals in May. The plan is commendable for many reasons. First, it lessens labour; second, the plants receive no check after sowing; third, they will bloom better and last longer, as the sun will have less power, and the weather a little cooler. When sown on hotbeds or in seed pans they are, as a rule, sown thickly, become drawn up weakly, and are often, through pressure of other work, left too long in a crowded state. In such cases they are ill adapted to bear the fierce rays of a May or June sun, so that those sown in the borders will often run a close race with those sown earlier. Asters, when sufficiently large to bear handling, may be planted elsewhere. They will stand the operation better than Stocks. As I have remarked, leaving the Stocks thick is simply for the purpose of selecting the double flowers for a permanency. The hotbed plan has its advantages to those who want early Stocks and Asters, and those who wish to prolong the season can do so by sowing as I have stated to give a succession to the end of the season. This border is usually doing good duty when the flower garden is on the wane.—G. R. Allis.

NOTES on VILLA and SUBURBAN GARDENING.

Street Gardens and Spring Flowers.—What I mean by street gardens are those small enclosures generally to be found attached to residences outside of the business portion of a town. These are admirable places for a display of miniature tasteful gardening of a humble kind. True, there are many examples one can easily observe as we travel on where the simple yet pretty flowers are cultivated, and where neatness and nice arrangement is prevalent; but by far the greater portion of these enclosures are not managed as they ought to be and could be, with very little trouble, by using some of the humble flowers of the season. A person passing by one of these little gardens that is cared for and kept in a creditable order will quickly see what a cheerful aspect it gives to the place, to say nothing of the enjoyment that the residents obtain from its appearance and the healthy exercise they derive from attending to the work of it.

It may be that some plants will not flower in some of these places, as their position is occasionally adverse to the well-doing of many plants, principally, perhaps, from the want of sun; but there are plants that will suit any place in any position, and every place does at least offer a little scope for neat arrangement of the soil, such as laying out miniature beds and narrow paths, all of which must be guided by the shape, size, and condition of the enclosure. This once done according to taste, and it is easy to edge the narrow borders with a few plants of Thrift, double red Daisies, or even the common yellow Primrose or a narrow strip of turf, all of which make capital and attractive edgings. Then, if there is room, a plant or two of the Ribes or red Flowering Currant, and two or three standard Roses, and perhaps an evergreen or two, such as Thuja aurea or an Aucuba japonica, both of which suit town gardens and in most cases grow well, and then to clothe the ground around them with a few patches of Musk and Mignonette, which both thrive in either the sun or shade. Common blue and white Violets and Hepaticas, which are excellent spring flowers, and deserve a better patronage among gardeners as well as amateurs, should be freely planted. Other flowers not to be omitted are Forget-me-nots, Pinks, Lily of the Valley, Sweet Williams, Antirrhinums, Polyanthus, Stocks and Wallflowers, as well as Crocuses, Snowdrops, Tulips, common white and other Lilies. Many other plants, of which there is no lack, might be mentioned as easy to grow and inexpensive to purchase.

I have purposely refrained from naming anything difficult to buy or grow, believing that for the purpose I have in view—which is to induce people to give a little time and attention to these enclosures and have the pleasure of doing a bit of garden work of their own—that simple hardy flowers are undoubtedly the best to begin with and the most certain to secure success.

It may be that some would fancy arranging the space as a miniature rock garden in a simple form, the materials for which might be easy to obtain; if so, there are suitable plants for that sort of garden. On spots where the sun cannot shine a garden of this kind would be sure to please. It is very nice to build up a little mound of stones or burnt bricks, clinkers, roots, &c., and to see such charming plants as Arabis albida and Aubrietia purpurea, one a white and the other a blue flower, dangling down and over at places with their multitudes of flowers to grace the spot. The commoner sorts of hedge Ferns planted here and there will enhance the pleasure and beauty of this garden; so would the St. John's Wort. Some of the large and small-leaved Saxifragas are very suitable for covering rocks; most of the Sedums, too, cling very closely to such materials, and clothe the place in winter as well as summer. Places might also be found for Musk, the yellow as well as the green-leaved Vincas, patches of Violets, Lily of the Valley, Solomon's Seal, Forget-me-nots, and many more; and during the summer several flowers of a more tender nature may be placed here and three each of which would add a speck of beauty to the little spot.

To this garden add a window or two decorated with plants, with all things kept in good order, and there would be much to be proud of, and many might have a spice of envy at so nice an arrangement with such common materials.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

KITCHEN GARDEN.

The weather has permitted us to have all the work well forward, but it still continues cold with frost at night. On Wednesday morning the 21st the wind changed to the west, and the day opened fine, but just as we were rejoicing in the delightful change the weathercock gradually veered round, and before sunset the old biting east wind was blowing. It is well that the sun has an opportunity to shine so that the ground becomes warm in the day, and the radiation from it by night

tempers to some extent the force of the chill blast, and the surface of the ground is so dry that nothing seems to be injured, and what is also much in favour of the growing crops is the fact that we have had no warm weather this season to accelerate growth.

The early Potatoes on warm borders are through the ground, but in order to save them from the effects of frost a little mould has been drawn over the hanlm with a hoe; we ran the hoe between the rows to destroy weeds and aërate the ground. Broad Beans have come through the ground rather strongly. These have also been hoed, and a little mould drawn up to the stems. We generally obtain a good supply of Radishes from under the ground vineries, by sowing between the rows of Carrots and Lettuce; they must be pulled out before they have time to injure the later crops. Any very slight glass protection of this sort is very useful; garden crops that are required early may be forwarded a month or six weeks at but a very trifling expense.

The crops of Onions, Carrots, Parsnips, &c., have come up beautifully and will require thinning out in a week or two, but we would rather have a change of weather before this is done. There is plenty of moisture yet in the ground, and we would rather not have rain until the weather is warmer. The spring-sown Cauliflower plants have been planted out in the open ground, having been previously hardened by exposure to the weather. Drills were drawn 2 feet apart, about 3 inches deep, and the plants carefully planted 2 feet apart in the drills. The ridge on each side effectually protects the plants from cutting winds, and by the time that it is necessary to hoe the ground the stalks will have grown sufficiently to require the ridges to be levelled during the operation of hoeing. Brussels Sprouts were some time ago sown in drills drawn in the same manner. We have found that the plants allowed to remain permanently in these drills do better than those transplanted. We do some both ways, as some seasons, mayhap, the transplanted sprouts would be the best.

We are cutting Asparagus from the open ground from the new sort, Connover's Colossal. We have not been able to distinguish the new sort from the old when a bundle of each were placed together; but if the one is earlier than the other it will be a very material gain. We have sown some Dwarf Kidney Beans in a sheltered position; the Newington Wonder is considered our best early variety, and for the general crop no better variety need be desired than Negro. We made another sowing of Peas, and sowed Spinach between the rows.

FRUIT AND FORCING HOUSES.

Pineries.—The work in this department at present is comparatively easy. In the fruiting houses where fruit in various stages are approaching to ripeness if necessary a high temperature may be kept up, but the precaution we have always advocated should be taken to open the lights at the top of the house early in the morning, admitting air afterwards as it is required, and this must be done cautiously; although Pines do not suffer from injudicious ventilation as do Vines, Cucumbers, and Melons, still the east wind may work mischief if admitted in large volumes. Some growers are recommending shading, but we protest against this until the days become hot. In our modern houses the panes of glass are large and easily acted upon by the sun, so that a slight shade is an advantage from 10 A.M. to 2 P.M. At present any ripening fruit may be protected from the sun by a sheet of paper raised above the fruit; this saves it from injury, and is all the shading required in Pine houses for some time to come.

Plants which are ripening fruit require but little water at the roots, and plants in pots are frequently injured from receiving too much. It is seldom that a plant requires water after the fruit changes to the ripening colour, and we never give manure water after the fruit has swelled to about half its size. Weak manure water applied at alternate waterings may not be injurious up to within, say, six weeks of the fruit ripening, but an overdose causes it to become black at the core. Excellent Pines are produced without manure water, and it is best to err on the safe side. Shut all the houses up early in the afternoon after syringing underneath the plants, damping the paths and walls. Utilise sun heat as much as possible; it is best for the plants and saves fuel.

CUCUMBER AND MELON HOUSES.

Our Cucumbers have not given us much satisfaction this year, notwithstanding more than ordinary care was taken with them. At midwinter they stopped growing without any apparent cause; the old leaves still remained green, but the young growths with leaves up to the size of a penny died. Evidently the roots were in a bad state, and it was a question whether it would be better to pull them out; they were, however, allowed to remain and were carefully tended. In a month young growths were put out and the plants recovered. It was our impression that too much moisture was kept up in the atmosphere, and perhaps too much was applied to the roots. They are now doing well and supplying fine Cucumbers. Some of the old soil has been removed, and fresh compost placed near the roots.

The Melons are now in flower, but before setting any of them a sufficient number of fruitful blossoms must be in flower about the same time. If one or two are set only two days before the others these will run away with the strength of the plant, and the fruit later set will not swell well. Should red spider appear either on Cucumber or Melon plants the only way to check it is to syringe the plants daily with rain water that has stood in the house a few hours.

ORCHARD HOUSE.

The Peach and Nectarine trees have now passed the setting period, and the fruit has set abundantly. Pear and Plum trees are now in blossom, and we are not sure of a good set on them; the rougher the house is that is constructed for them the better. If the glass is put in so that there is a little ventilation at every lap, and if the ventilators cannot be shut close by an inch or so all the better. Our house is far too well constructed for Pears and Plums, there is little or no ventilation except by the ordinary openings. In the rough houses at Sawbridgeworth, and in one we have seen in Mr. John Fraser's nurseries at the Lea Bridge Road, Pears, Plums, and Cherries set without any trouble. A little ventilation ought to be left on at night to cause a circulation. Avoid spilling water in the daytime, and the east wind drawing through the house when the sun shines does good.

Strawberries on the shelves have been thinned out to give those that remain a fair chance. It ought to be noted here that Strawberries will do no good if the plants are crowded.

PLANT STOVE AND ORCHID HOUSES.

Caladiums have been shaken out of the pots and repotted in others; the plants were first started into growth. The compost used is turfy loam, peat, and some rotted manure. The plants are placed quite close to the glass, as nothing looks worse than to see Caladium leaves with long and weak stalks that will not bear the weight of the leaf. When foliage plants are badly grown they are not adapted for any decorative purpose whatever. Other foliage plants require repotting, and it is not well to allow them to become potbound; most of the foliage plants adapted to stove culture require to be grown rapidly and must not be checked. Ferns are the same, the roots are not readily discerned, and a plant may become potbound before it is noticed. They should be repotted as soon as the roots begin to grow amongst the drainage.

All Orchids in baskets or pots which are making fresh roots must now be examined, and chopped sphagnum with some turfy peat be placed round them. Those in small pots may be repotted into larger, taking care to preserve the roots as much as possible, and it is also better to under than over-pot. It must also be noted that all the Phalænopses and most of the Cypripediums require much shade, while Cattleyas and Dendrobiums require only to be protected from bright sunshine.

FLOWER GARDEN.

Mr. Record attends to this department so ably that little is left to be included in the "Doings." Alluding to Pinks he says, Plant them out at once. Of course, if they are not out, the sooner the better; but to do any good with Pinks they ought to have been planted out six months ago. They should be established in the beds before the winter frosts set in. This has not been a good winter for them; even the best growers complain of many losses, but out of three beds here planted in October not a single plant has failed, except one unhealthy plant put out in spring; they are now making vigorous growth. If Pinks are planted late the lacing will be imperfect. Carnations and Picotees must be wintered in frames in small pots, so that it is quite necessary to plant in spring. They must be planted out and repotted before they make much growth. Ours were done early in April. The pots may be placed out of doors now. The Auriculas are now in full beauty. As soon as the trusses open they are removed to a north aspect, and the colder is the weather will they last all the longer in beauty. Some of the trusses have been out nearly a month. The flowers are shaded from bright sunshine.

Roses are now starting into growth, and so far the frost has not injured any of the young growths, but the bud worm is busy and must be picked out with a needle, which is the most useful appliance for this purpose. Some of the more tender sorts on the walls have become infested with mildew, and had to be dusted with flowers of sulphur.—J. DOUGLAS.

TRADE CATALOGUE RECEIVED.

John Laing, Forest Hill, London.—*Catalogue of Stove and Greenhouse Plants, Florists' Flowers, Roses, &c.*

HORTICULTURAL EXHIBITIONS.

SECRETARIES will oblige us by informing us of the dates on which exhibitions are to be held.

JERSEY.—May 5th, Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.

BATH.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.

BLACKBURN.—May 17th, 18th, and 19th. Mr. W. Ditchfield, Hon. Sec.
CRYSTAL PALACE COMPANY.—Flower Show, May 29th; Rose Show, June 19th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.
COVENTRY.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.
LEEDS.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leede, Sec.
BURTON-UPON-TRENT.—June 16th. Mr. Wm. Shave, Bond Street, Sec.
GLASGOW.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
FAREHAM.—June 23rd. Mr. H Smith, Sec.
EXETER (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.
WISBEACH.—June 30th. Mr. C. Parker, Hon. Sec.
MAIDSTONE.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.
SPALDING.—July 1st and 2nd. Mr. G. F. Barrell, Hon. Sec.
SOUTHGATE.—July 3rd. John Miles, Esq., Hon. Sec., Southgate, N.
DURHAM AND NORTHUMBERLAND.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.
KILSBY.—July 8th. Sec., Mr. C. E. Bracebridge.
OXFORD (Roses).—July 9th. Mr. C. R. Ridley, Hon. Sec.
NOTTINGHAM.—Rose Show, &c., July 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.
HEWORTH.—July 14th. Mr. R. H. Feltoe, Heworth, York, Hon.-Sec.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

VINES MILDEWED (*A Gardener*).—We cannot, by the data you give us account for the appearance of the mildew, though it may arise from the imperfect state of the drainage, causing the border to be wet and the roots in an inactive state. We, however, think the ventilation must have been defective, and the moisture maintained too great. The remedy is, as you no doubt are aware, to dust the infested parts with flowers of sulphur. Before another season the border should be examined, and if the drainage be defective it should be rectified. The shanking is confirmative of the border being in an unsuitable state for the Vine roots.

NEAPOLITAN VIOLETS TURNING SINGLE (*Carolus*).—The late blooms of plants being comparatively small and apparently single-flowered is only what may be expected by exhaustion of the plants. The plants ought to be hardened off, the lights removed, and rooted suckers planted in a border of rich soil in an open situation (though if shaded from midday sun all the better), in rows a foot apart, and the plants 9 inches asunder in the rows. They should be well watered during dry weather, keep all runners removed, and banish weeds. Remove the plants with balls to a frame at the close of September. Giant is a form of the Russian, being a stronger grower, and the flowers have longer footstalks. Its season for frames is in winter and spring up to April. Treat it the same as the Neapolitan. In addition to frames you should have beds of Violets outside, which form a good succession; in fact, we have them from September to May inclusive.

VIOLAS FOR SPRING BEDDING (*L. L.*).—Of Violas, which you may raise from seed, the best are V. cornuta Blue Bell (violet), V. cornuta alba (white), and V. lutea grandiflora major (golden yellow). Blue Bell is the darkest we know; if you wish for a paler colour, V. cornuta Perfection is paler and very good, but is not so early as the preceding. Pansies for your purpose are Cliveden Purple, Cliveden Yellow, and Cliveden White; the Cliveden Blue does not perfect seed. The blackest variety is probably Black King.

USES OF HEATED PIT (*A Constant Reader*).—The pit would at this season be most profitably employed in growing Cucumbers and Melons, and in winter it would, we presume, be employed for wintering bedding-out plants, which would be cleared out by May. The plants would, if you can command a sale, be profitable, and is the best use that could be made of it for winter, whilst Cucumbers and Melons, especially the former, would also be a source of profit in the summer; but you will have to ascertain what is in demand, and produce a supply accordingly.

INSECT ON CUCUMBER LEAVES (*Howard*).—There were no insects in the box, but the leaves show beyond a doubt that they have been severely attacked by red spider. Flowers of sulphur sprinkled on the hot-water pipes, or dusted over the leaves, and mixed with the whitewash, will be the proper remedy.

INSECTS ON BROCCOLI ROOT (*Chepstow*).—The Broccoli is very severely club-rooted, and the white insects are Acari, which subsist on the diseased part. There would be no Acari if the root was not clubbed. To avoid club-root do not grow any of the Cabbage tribe on the same plot in two following years, either as a seed bed or to grow for cutting.

GRAPES RUSTED (*H. L. C.*).—The cause of rust is much disputed; but we are quite satisfied that it is caused by the Grapes whilst young being grown in a temperature too high, and then exposed to currents of cold air. It is not infectious, and there is no remedy. A lower temperature and more careful ventilation will prevent the occurrence.

VINE RODS BREAKING IRREGULARLY (*J. M. K.*).—Some of the rods breaking and others remaining dormant demonstrate that the roots do not supply sufficient sap. They are in an outside border, and the exceptionally cold and long-continued winter has rendered them inactive. If the border were covered with fermenting hot stable manure, it might now stimulate them. We advise you next winter to have the border mulched, and over the mulch to place a tarpaulin or other rainproof covering.

SOWING GERANIUM SEED (*Triceps*).—What you call "the husk," we conclude is the aril, which surmounts every Pelargonium (Geranium) seed. Do not pull it off, but insert every seed with the aril upmost, and let it project above the surface of the soil with which you cover the seed.

CORK (*Jersey*).—Write to the Company. Their offices are at 23, Upper Thames Street, London, E.C.

CUTTINGS DECAYING (*W. C. and S.*).—By a careful examination of the soil and a perusal of your case as stated, we conclude that the fault is not in the soil or structure. We believe if you water less frequently and more thoroughly, avoiding mere sprinklings, and a close atmosphere, that you will find a remedy for the evil of which you complain. Fungus is not the cause but the effect of the decay. We are confirmed in this view by a gardener who has called at our office and who has frequently had plants from you. He says you "send him good plants, but the roots are too dry at the bottom of the pots, and too wet near the surface."

MELONS IN GREENHOUSE (*R. T. W.*).—Take up the plants without stopping to within 9 inches of the top of the trellis, and then take out the point of each plant. The plants will put out laterals as they grow, and upon these the fruit will be produced With due care in fertilising the flowers, and stopping the laterals two joints beyond the fruit, you will be able to secure sufficient fruit on each plant. The plants should be 2 feet to 2 feet 6 inches apart.

STOPPING VINE SHOOTS (*H. A. P.*).—Trained on the spur system the shoots should be 15 inches to 18 inches distance apart on opposite sides of the rod, so that the spurs will on both sides of the rod be the distance named apart. Shoots not fruiting should be stopped at the sixth leaf, and to one leaf afterwards throughout the season, and fruitful shoots be pinched at one or two joints beyond the bunch.

FERTILISING (*Idem*).—It is done by applying the pollen of one plant to another of the same race, its anthers having previously been removed. A pair of sharp-pointed scissors for the removal of the anthers, and a camel-hair pencil for the application of the pollen, are all the instruments required. Place the pollen of the fertilising flower upon the stigma of the seed-bearing one, and enclose in a gauze bag to keep off bees and insects. It is a simple operation, giving very often curious and always interesting results.

LIQUID MANURE FOR GREENHOUSE PLANTS (*Idem*).—Horse droppings make a good liquid manure, one peck to twenty gallons of water; and 1 lb. of guano, or one peck of fresh cow dung to the same quantity of water in each case, are also good liquid manures for softwooded greenhouse plants, or all plants except those requiring peat soil. See answer to "*Timepiece*" respecting the Geraniums. Your plants show traces of thrips. Fumigate when the foliage is dry.

GERANIUMS LEAVES SPOTTED (*Timepiece*).—The leaves are suffering from what is known as "the spot," arising in most cases from too close and moist atmosphere at night, which causes the deposition of moisture upon the leaves, and the sun falling upon those whilst wet heats the water and scalds the leaves. It usually occurs in a season like the present—long cold and dull, and suddenly changing to bright days. The only remedy is to admit air more freely, and especially in the early part of the day, leaving on a little at night so as to prevent the condensation of moisture.

GERANIUM LUCIUS.—"If '*C. R.*' can find no person to supply him nearer from your columns, Mr. Cannell of Woolwich, or Mr. Potten of Sissinghurst, Kent, have it in stock.—AGE."

DETERRING RABBITS (*J. H.*).—As a wire fence is inadmissible for excluding Rabbits from your flower beds, we know of but one other remedy—a little dog chained to a kennel near them. Soot would not protect the flowers.

NAMES OF PLANTS (*J. G. S. and Ten-years Subscriber*).—Your specimens are only leaves, and we cannot name from them. (*W. J. H.*).—1, Abutilon Thompsoni, var. marmoratum; 2, Silene sp.; 3, Browallia elata. (*C. B.*).—1, Sparmannia africana; 2, Acacia sp.; 3, Styrax sp. (*Mary*).—Specimens unsatisfactory; 1, Saxifraga crassifolia; 3, S. sarmentosa? 2, Berberis sp.; 4, Thuja occidentalis (Arbor-Vitæ). (*S. P.*).—1, Eriostemon salicifolium; 2, Ceterach officinarum; 3, Asplenium trichomanes. (*W. C.*).—6, Hibbertia volubilis; 1, Adiantum reniforme; 2, A. æthiopicum; 4, A. hispidulum; 3, Cystopteris fragilis; 5, Selaginella Martensii. (*G. H.*).—Both indeterminable from specimens sent; the Moss is a Hypnum; the flower may be Podophyllum. (*Robert*).—1, Prunus serotina; 2, Epimedium alpinum; 3, Saxifraga crassifolia? (no leaves); 4, Cereus speciosissimus. (*A Constant Reader, Sherborne*).—Cydonia japonica. It is not unusual for the flowers to vary from deep to pale rose colour.

POULTRY, BEE, AND PIGEON CHRONICLE.

PROFIT FROM EXHIBITION POULTRY.

WE read the other day in the *Pall Mall Gazette* a touching account of a poultry-yard. The writer was one who had heard of the glorious *coleur-de-rose*-bathed accounts of eggs and chickens bringing-in a marvellous profit. He expected to do likewise, but his airy castles were soon crushed, and his eggs cost him 2½*d.* more each than he could have bought them for at a shop. His failing so utterly may be accounted for by want of ordinary practical knowledge of poultry; for this he seemed to lack, as poultry kept simply for eggs and table birds should pay handsomely. The absurdity of expecting enormous profits, however, has been so often shown up, that we will only speak a word on the profits from exhibition poultry.

In this branch, again, huge sums are supposed to be made annually. We know of one fairly successful amateur who just pays his way, and yet he is considered to be rapidly becoming a young Crœsus. The uninitiated hear of birds realising large prices, of good egg sales, and many money prizes, but they have no idea of the very heavy expenditure. Entry fees, food, attendants, and carriage swallow-up most of the profits, and

leave ordinarily but a poor balance. There are, however, some yards which do yield a good profit, and many of these, moreover, are owned by gentlemen amateurs who are glad to ride a favourite hobby, and make it profitable as well. We are convinced from experience that for a yard of exhibition birds to be really profitable it must be entirely under the owner's personal supervision and management, or that of a skilful and experienced manager. Such managers, however, are few. We could hardly name a dozen whom we should care to have to superintend our own yards, and so amateurs who really mean to make exhibiting pay must work themselves.

We have from time to time seen interesting accounts of the profits of small yards where the birds have been kept entirely for eggs and table birds. These accounts have always been of very small establishments, where the profit or loss could only be limited, and we have consequently procured the account book of a successful exhibitor for twelve months, who has kindly given us permission to make any use of it, and we cannot help thinking that the results will be alike interesting to all fanciers. The accounts we have before us are those of 1874. They include every penny spent or received during that year. The gentleman whose accounts they are exhibits three breeds; one of the larger varieties, one for variety classes, and one of Bantams. To prevent recognition we will change the names of the breeds he actually keeps, and call them Buff Cochins, Leghorns, and Black Bantams. The gentleman keeps a young man of about eighteen to feed, clean out the houses, and do all such-like work, he himself superintending the matiug, change of foods, and selection for exhibition, &c. We may safely call him a member of the successful class of exhibitors, and one who has worked hard, and does work hard with his hobby.

First, then, for expenditure. We find the total sum spent during the year for entry fees at shows was £48 15*s.* 6*d.*; for labour and wages for the twelve months, £37 16*s.* 9*d.*; the total sum for railway carriage, £32 10*s.* 6*d.*; the bills for foods of all kinds, £36 5*s.* 6*d.*; birds and eggs were purchased to the value of £69 18*s.*; the sum paid for advertisements was £5 17*s.* 6*d.*; and sundries, such as catalogues, telegrams, egg boxes, string, nails, baskets, &c., came to £5 14*s.* 9*d.* These several amounts make the total expenditure £236 18*s.* 6*d.* We must notice that nothing is charged for the exhibitor's own expenses to and at shows, but in the majority of the cases he did not attend, and the birds were sent by train as parcels. The servant did not accompany the birds in any case. We find, too, no charges for rent, as the runs for the birds were wood and meadow land, which would have to be in use apart from keeping the poultry.

We will now turn to the receipts. The amounts won in cups and money prizes amounted to the goodly sum of £121 9*s.* The sale of eggs for sitting and domestic purposes came to £42 9*s.* 3*d.*, and the sale of birds to £190 18*s.* A few extra receipts in the shape of birds killed for table, &c., came to £1 17*s.* 2*d.* These sums added together give us £356 13*s.* 5*d*, taking from which sum £236 18*s.* 6*d.* we find the balance of £119 14*s.* 11*d.* to the good.

Examining the exhibition department even more minutely we find the carriage and entry fees come to £81 6*s.*, and the winnings to £121 9*s.*: hence we can deduce £40 3*s.* was the sum actually made in exhibiting. Of course in such yards the profits come much more from the sale of birds through their winnings than in the actual amount of prize money. In this case, however, the exhibitor himself spent £69 18*s.* on birds, for although he is one of many years' standing, birds came into the market which he thought it advisable to procure, or else his profits would have been much larger, for it is quite out of the way for anything like such an expenditure on birds being made. We must also say we find no mention of losses by death of valuable birds. We have simply made out the gross receipts and expenditure for twelve consecutive months.

Thus much, then, for the £ *s.* *d.* department of a fairly successful exhibition yard of poultry. We do not pretend that all can do the same, or that even much larger profits may not be made. We picked out this gentleman as representing an ordinary successful exhibitor, and give his statements. We ourselves consider them highly satisfactory, and we are convinced many who do not now find their poultry profitable can make them pay handsomely, but it cannot be done without a knowledge of poultry management, hard work, and zealous watchfulness.

We know of one gentleman who is up at 6.30 A.M. throughout all the early months of the year that he may feel sure the "babies" are being attended to and fed at early times. It is not only in poultry affairs, but in every other pursuit, that we have to be always looking out not to be left behind.—W.

Bees in Somersetshire.—I think the coming season here is a very promising one where the bees have been managed properly. I have six hives, very strong; three of them have already commenced in the super glasses. I had twelve hives last autumn, which I united, making six of the strongest I ever saw. I took in supers last season 296 lbs. of very fine honey, most of which I sold for 1*s.* 6*d.* per lb. I found out a very simple and effectual mode of uniting hives, which I will communicate to you later in the season. I have taken a great interest in bees for the last ten years, and the results are well known in this locality.—Robert Manfield, *Wellington.*

EGG BUYERS AND SELLERS.

A correspondent in your last issue having narrated his unfortunate experience in dealing with sellers of eggs for hatching, would you kindly allow me to tell mine, which shows that there are some sellers who are as much disappointed when a sitting of eggs turns out badly as the buyers can be? Last year I asked for two sittings of Brahma eggs from a famous breeder. I received them at different times, as I was too impatient to wait to have them all at once. Out of the first sitting I had only two cockerels, and out of the second I had four cockerels. Two of these last died young, having been weak chickens which I had to assist out of the shell. I then asked for another sitting, and I received them with a request that the question of payment should be delayed till the result should be known. Out of this sitting I had two cockerels and four pullets, which I considered very good, as the eggs had travelled over five hundred miles, and, therefore, without more ado I sent the vendor a post-office order for the full price of the eggs. Thus I had ten chickens out of my three sittings of eggs, for the two that died can hardly be counted, as they would never have hatched had I not assisted them. All these ten chickens turned out to be rather more than fairly good. I exhibited some of them on two different occasions, of course all in the same class, and I gained one second prize, two high commendations, and one commendation. The first prize on one occasion going to birds of my own breeding, and on the other to birds from the other end of the kingdom. These ten chickens cost me £4 10*s.* including the carriage of the eggs, and I do not believe I could have bought one of the cocks for the money.

This year again I wrote to a gentleman as soon as I saw his advertisement in your columns, and asked him to book me for a sitting of eggs to be sent to me in the end of March or beginning of April. He answered that he could send me the eggs at that time or sooner if I liked, and he thought they would prove fertile. I had doubts about the advisability of having them sooner than the time I had fixed, as I had experienced the general difficulty of obtaining eggs to hatch early this season. However, the desire of securing early chickens prevailed, and I thought that I would, perhaps, be more successful with eggs coming from a warmer climate than I had been with my own, so I had my sitting of eggs early in March. In due time one and only one chicken made its appearance. I wrote for another sitting, and asked if I would have to pay full price for it, considering my ill-luck with the first. The vendor answered that he was truly sorry to hear of such a poor result from my first sitting, and sent me another at half price, and promised that if the result proved no better he would give me another sitting gratis. The second sitting is now under the hen, and I do not yet know what the result may be, but I am sure that if it is not good the vendor will be as much disappointed as I shall be.

I have no doubt there are people who advertise worthless eggs at considerable prices, but I do not think that all who do so do it knowingly. A man may undeservedly be awarded a prize at a show, or, perhaps, a first prize at some small local show, and with some people a first prize is always a first prize whether gained at the Crystal Palace or at the local parish show, and elated by his success he may wish to give others the opportunity of obtaining his prize strain, and therefore he advertises eggs. Purchasers of such eggs may expect to meet with disappointment, and however well the eggs may hatch, they will probably not have one good chicken. What is worth doing is worth doing well, and for all the difference between the price of the best eggs and ordinary eggs, it is better to go at once to the most successful breeders of the kind that you want. Successful breeders have a reputation to sustain, and I think they have a kindly feeling towards others who follow the same fancy, and they are willing to assist them in any way they can. At all events that is my experience.

It is not fair to accuse a vendor of eggs of dishonesty because a sitting of eggs does not hatch as many chickens as the purchaser expects. If every one hatched either the price of eggs would be considerably raised, or else the value of prize poultry would fall very much.—Geo. Wilson.

ACCRINGTON SHOW OF POULTRY, &c.

The annual meeting of the Accrington Agricultural Society came off on the 22nd inst. The entries in all sections of which we write were very good, as will always be the case where such substantial prizes are offered—viz., £2, £1, and 10*s.* for poultry, and £1 and 10*s.* for Pigeons and Rabbits.

In single *Game* cocks Mr. Matthew won the cup for Game with his well-known Brown Red, the second also a Brown Red, and withal a good bird. Mr. Harley showed an excellent Black Red,

which was, however, only commended. In Game cocks, any other colour, Messrs. Walton won with an excellent Pile, the second and third being Duckwings, both good and well shown. In Red Game hens the first was the one first at Great Harwood, again beating the same bird. All were Brown Reds. In the following class a Pile was first, and Duckwings second and third. The local Game cocks were better than we have usually seen them here. Many of the best *Dorkings* were bad on the feet, but the winners were good, the first and third Dark, and second Silver-Greys. *Cochins* were very good, Buffs winning. In the next class the first were Partridge, as also the third; the second, which were White, were a capital pen. *Spanish* were a very even class, although the winners stood out from the others. In *Brahmas* the winners were of the Dark variety. In *Hamburghs*, Gold-pencils, the second-prize cock was by far the best, but the pullet in the first-prize pen was far a-head of the second. Silver-pencils were a good lot, the cocks being particularly good in marking. Gold-spangles were good, the hens in the prize pens being particularly fine in all respects. Silver-spangles were a fair lot, some of the cocks being specially well marked and white; the Blacks were but a moderate lot. In *French* fowls the first were Crêve-Cœurs, second La Flèche, and third Houdans; in the Variety class the prize went to Polish and Cuckoo Cochins. In the Game *Bantam* classes Mr. Hall left little for the rest of the exhibitors, winning a cup and first in three of the classes. These classes were much better than we have generally seen them here. In Red hens Mr. Sharples won first with a model hen, not one of the smallest, but in every other respect perfect, and in the following class all the winners were Piles. In Bantams, any other variety, the winners were Blacks. The entries in *Turkeys* and *Ducks* were not large but the birds were good, Mr. Walker winning most of the prizes.

Pigeons were shown in pairs except the Carriers and Ponters. In *Carrier* cocks the first was a Black, and second and third Duns, one of the best birds being so severely trimmed as to destroy its chance of a prize. In hens the first and third were Duns, and second Black. The third shown by Mr. Walker was by far the best, but not at all in show condition. In *Tumblers*, Mr. Yardley won with a grand pair of Almonds. These birds were both rich in colour and beautifully broken in feather. *Barbs* were Black, and Reds second, the latter pen containing the cock first at Harwood, but the hen was too young. The third, also Black, were good. English *Owls* though numerous were not first-rate, although the winners were pretty good. First and second Blue, and third Silvers. In *Pouter* cocks the first was a Blue good in all points, second White, and third Red; but the hens were superior to the cocks. The first-prize Blue being quite a model, not alone in measurement, but also in style, girth, and carriage. The second, a Blue, lost only in girth; the third being White. *Fantails* were good, but the pens too small to show two birds. In *Turbits* Blues were first, Silvers with shell crowns second, and Yellows third. *Dragoons* as a class were not as good as we expected to find, but the first-prize pair of Blues were perfection, in our opinion, in all respects; the second were Grizzles, very good in all points; and third Blues, but the latter were a little too flat on the skull. *Trumpeters* were very poor. In *Jacobins* the first were Reds, good but rather large; second a pretty good pair of Yellows; and third Reds. In *Nuns* the first and second were Blacks, and third Reds. *Antwerps* were a good class, but there were some pairs of cocks shown. The winners, first Silver Duns; second Red Chequers; and third Blue Chequers, all Short-faces and very good. In *Magpies* the first were Red, as also the third, the second being Blacks. In the Variety class the prizes were awarded as follows:—First Fairy Swallows, second Spangled Ice, and third Pigmy Pouters. There was no Selling class for Pigeons.

Lop-eared Rabbits were not a large entry, the first and second stood as at Harwood a week ago—viz, doe Black-and-white, 22½ by 4⅝; second, doe, Tortoiseshell, 21½ by 4¾; third, Fawn buck, 21½ by 3¾. Angoras were very good in all respects. In Himalayans was one of the best seen for some time, the class being altogether good. Silver-Greys were a fair lot, Miss Mortimer winning by size alone over Mr. Hallas's excellent young Rabbit. The Selling class was large and good, Lops winning first and second, and a Silver-Grey third, and being in the list at the low price of 10*s.* each were soon picked up.

Game.—*Black or Brown Red*—*Cock.*—Cup, S. Matthew, Stowmarket 2, R. Ashley, Nantwich. 3, J. Cock, Worcester. *hc*, R. Garnett, Wyreside; J. Fletcher, Stonesclough; W. Ormerod, Todmorden. *c*, W. Watson, Nantwich; D. Harley, Edinburgh; A. Sngden, Cleckheaton. *Hen.*—1, W. Ormerod. 2 and 3, C. W. Brierley, Middleton. *hc*, R. Baker, Todmorden; J. F. Walton, Rawtenstall (2)

Game.—*Any colour.*—*Cock*—1, J. F. Walton. 2, J. A. & H. H. Staveley, Driffield. 3, E. Winwood, Worcester. *Hen.*—1, J. F. Walton. 2, S. Matthew. 3, J Fletcher.

Game.—*Cock.*—*Within three miles of Accrington.*—1, J. Wood, Accrington. 2, J. Greenhalgh, Huncoat. 3, S. Cooper, Oswaldtwistle.

Dorkings.—1 and 2, J. Walker, Rochdale. 3, W. H. Crabtree, Levenshulme. *hc*, W. Clough, Farby, Leeds; W. H. King, Rochdale.

Cochins—*Buff or Cinnamon*—1, J. Walker. 2, W. H Crabtree. 3 and *vhc*, W. A. Taylor, Manchester. *hc*, Mrs. Allsopp, Worcester (2); H. Tomlinson, Birmingham; J. F. Clarkson, jun., Preston; S. R. Harris, St. Day. *Partridge and White.*—1 and 3, W. A Taylor. 2, H. Beldon, Bingley. *hc*, H. Lacy, Hebden Bridge; J. F. Clarkson, jun.; J. Walker.

Spanish—*Black*—1, H. Beldon. 2 and 3, Mrs. Allsopp. *hc*, S. L. Edwards, Tarporley; J Thresh, Bradford; J. Smalley, Livesey.

Brahmas.—1 and 2, T. F Ansdell St Helens. 3, W. Whiteley, Sheffield. *hc*, J. F. Smith, Sheffield; W. H. Crabtree (2).

Hamburghs.—*Golden pencilled.*—1, G. & J. Duckworth, Church. 2, H. Beldon. 3, C Judson *vhc*, H. Beldon; H. Pickles, Earby; G. & J. Duckworth. *Silver pencilled*—1 and 2, H Beldon. 3, H. Pickles.

Hamburghs.—*Golden-spangled*—1, G. & J Duckworth. 2, H. Beldon. 3, T. Dean, Keighley. *hc*, N Marlor, Denton; T. Blakeman, Tetlenhall; H. Pickles; G. & J. Duckworth. *Silver-spangled.*—1, J. Fielding, Newchurch. 2 J. Fielden, Newchurch. 3, Ashton & Booth, Broadbottom, *hc*, J. H. Howe, Denton; H. Beldon (2).

Hamburghs.—*Black*—1, W. Rentley, Holmfirth. 2, H. Beldon. 3, Stott and Booth, Bury *hc*, W. Wilson, Waterfoot; H. Pickles.

French.—1, W. H. Crabtree. 2, E. Walton, Rawtenstall. 3, W. Whitworth, jun, Longsight. *hc*, C. M. Saunders, Lancaster; R. J. G. B. Knight, Ripley.

Any other Variety—1 and 2, H Beldon. 3, J. Walker, Rochdale. *hc*, T. Aspden; A. & W. H. Silvester, Sheffield; Rev. A. G. Brooke, Shrewsbury.

Any Variety except Game and Game Bantams.—*Three miles of Accrington.*—1 and 3, T Aspden. 2, G & J. Duckworth.

Selling Class.—1 and 2, R Corless, Broughton. 3, A. Bamford, Middleton. *hc*, J. F. Walton (2). *c*, J. Powell, Bradford.

Game Bantams.—*Black or Brown Red.*—*Cock.*—Cup, G. Hall, Kendal. 2, A. Sugden, Cleckheaton. 3, W. F. Addie, Preston. *hc*, J. Saul, Preston; J. B. Fletcher (2); T. Barker, Burnley; G. Hall; W. F. Addie; E. Walton. *Hen.*—1, T. Sharples, Rawtenstall. 2, A. Sugden. 3, W. F. Addie. *vhc*, E. Walton. *hc*, J. R. Fletcher (2); W. F. Addie.

Game Bantams—*Any other colour.*—*Cock.*—1, G. Hall. 2, Bellingham & Gill, Burnley. 3, T. Barker. *Hen.*—1 and 2, Bellingham & Gill. 3, T Barker.

Game Bantam.—*Cock.*—*Within three miles of Accrington.*—1, Whittaker and Birtwistle, Haslingden. 2, G. Riley, Baxenden. 3, G. Anderton, accrington. *hc*, G. Anderton; T. A Mylrea, Church.

Bantams—*Any variety except Game*—1, Milner & Beanland, Keighley. 2, H. Beldon. 3, Bower & Horsfall, Harden, Bingley. *hc*, R. H. Ashton, Mottram; H. B. Smith, Preston.

Turkeys—1 and 2, J Walker.

Geese—1 and 2, J. Walker. 3, J. Christie, jun., Clayton-le-Moors.

Ducks.—*Aylesbury.*—1 and 2, J. Walker. 3, C. Holt, Rochdale. *hc*, C. Holt; J. Hedges, Aylesbury. *c*, J. Hedges *Rouen.*—1, J. Walker. 2 and 3, J. Wakefield, Newton-le-Willows. *Any other variety.*—1, A. & W. H. Silvester. 2 and 3, H. B. Smith. *hc*, H. B. Smith; J. Walker.

PIGEONS.

Carriers—*Cock*—1 and 2, E. Horner, Harewood. 3, J. Chadwick, Bolton. *hc*, H. Yardley, Birmingham; J. Walker, Rochdale. *c*, J. Stanley, Blackburn (2); J. Chadwick. *Hen*—1, H Yardley. 2, J. Chadwick. 3, J. Walker. *vhc*, F. Raddeley, Sale *hc*, J Stanley (2).

Tumblers—1, H. Yardley. 2, A & W. H. Silvester, Sheffield. 3, T. & W. Oddie, Brierfield. *vhc*, W. Boydone, Dunse. *hc*, E. Horner; J. Gardner, Preston; H. Yardley (2). *c*, A. & W. H. Silvester, Sheffield.

Barbs.—1, E. Horner. 2, R. White, Manchester. 3, J Stanley.

Owls.—1, J. Richmond, Oswaldtwistle 2, T. & W. Oddie. 3, R. White, Manchester. *hc*, S Lawson, Preston; Rev. A. G Brooke, Shrewsbury. *c*, J. Holden, Rochdale; A. Warburton, Haslingden; H. Yardley.

Pouter or Croppea.—*Cock*—1, W. Nottage, Northampton 2, Mrs Ladd, Calne. 3, E. Horner *hc*, E. Horner; P. R Spencer, Hereford; J. Richmond, Oswaldtwistle; L. & W. Watkin, Northampton. *c*, W. A. P. Montgomery, Belfast; Mrs Ladd. *Hen.*—1, W. Nottage. 2, E. Horner. 3, Mrs. Ladd. *vhc*, L. & W. Watkin. *hc*, A Thewlis, Meltham; E Horner; L. & W. Watkin.

Fantails.—1, W. J. Warhurst, Staleybridge. 2, J. F. Loveraidge, Newark. 3, E. Horner. *c*, S. Lawson, Preston.

Turbits.—1, T. S. Stephenson, Beverley. 2, W Boydone, Dunae. 3, E. Horner. *hc*, H Yardley; E. Horner; J. Gardner, Preston. *c*, M. Stackforth, Croston; R. White; J. Gardner.

Dragoons.—1 and 3, R. Woods, Mansfield. 2, J. Holland, Cheetham Hill. *vhc*, J. Stuttard, Colne; H. Yardley. *hc* J. Stuttard; R. White; E. Horner; J. Chadwick, Bolton. *c*, J. Holland; J. Chadwick.

Trumpeters.—1, J. Gardner, Preston. 2, Wells & Sherwin, Ripon. 2, T. S. Stephenson.

Jacobins.—1, J. Powell, Bradford. 2, W Boydone. 3, S. Lawson, Preston. *hc*, S. Lawson; J Richmond; E. Horner; J. Gardner. *c*, A. Smith, Halifax.

Nuns—1, E. Horner. 2 and 3, Rev. A. G. Brooke.

Antwerps.—1, F. Woodhouse, Blackburn. 2, J. Stanley, Blackburn. 3, R. Brierley, Fishpool. *hc*, S Lawson, Preston; A. Smith, Halifax; R. White; J. Gardner; H Yardley. *c*, J. Stanton, Chorley; E. Horner.

Magpies.—1, J. Richmond. 2, W J. Warhurst, Staleybridge. 3, E. Horner. *hc*, J. Gardner; E. Horner; J Richmond.

Any other Variety.—1, J. Richmond. 2 and 3, A. & W. H. Silvester, Sheffield. *hc*, Wells & Sherwin, Ripon; E. Heath, Blackburn; R. White; E. Horner; J. Richmond; J. Gardner.

RABBITS.

Spanish—1 and 2, J. Irving, Blackburn. 3, R. Barrett, Bronghton. *hc*, A. Shaw, Blackburn; J. Irving.

Angora.—1 and 3, H. Swetnam, Fulford. 2, A. Atkinson, Huddersfield. *hc*, S. Buckley, Healey. *c*, R. A. Boissier, Penshurst.

Himalayan—1, W. Hey, Rochdale. 2, A. Atkinson. 3, J. Hallas, Huddersfield. *hc*, T. & R. Mills, Accrington; J Irving, Blackburn.

Silver Grey.—1, T. F. Mortimer, Rose. 2, J. Hallas, Huddersfield. 3 Fouad and Chappell, Westborough *vhc*, H. Swetnam, Fulford. *hc*, T. Schofield, jun., Cheetham; J Cornber, Warrington. *c*, J Barnes.

Selling Class.—1, T. Schofield, jun, Cheetham 2, J. W. Harling, Barnley. 3, F. Sabbage, Northampton. *hc*, Mrs. H. Schofield, Spalding; J. W. Harling, Barnley; S Wrigley, Rochdale; Fouad & Chappell; J. Hallas. *c*, B. J. Lambert, Accrington; J. Barnes, Haslingden.

Judges.—*Poultry:* Mr. John Martin, Queens' Court, Baschurch, Salop; Mr. Simeon Fielding, Trentham, Stoke-on-Trent; Mr. James Dixon, North Park, Clayton, Bradford. *Pigeons and Rabbits:* Mr. E. Hutton, Pudsey, Leeds.

JACOBIN.

Mr. E. E. M. Royds, the President of the Northern Counties Columbarian Society, read the following highly interesting paper at one of its recent meetings:—

"Doubtless you are all aware my only hobby for some time has been the Jacobin. Since the year when I was so successful at Bingley Hall I have kept nothing but Jacobins, and endeavoured, by giving as much of my time as business would permit, to raising this beautiful variety of Pigeon to the standard it has now reached. The Jacobin (Columba cypria cucullata) is mentioned in the second volume of 'Ornithology of Ulysses Aldrovandus,' 1600, published at Bologna:—'There are two kinds—one hooded, the other smooth heads, and some have

naked and others feathered feet; the hoods are erect and large.' With part of this I agree, but I certainly do not want any erect hoods; for the closer the feathers fit the head the better, and the more the bird is valued; at the same time, though, there are other properties, and very important ones, to be looked for.

"The Jacobin is well known over England, France, and Germany, and derives its name from its having a clear white head, enveloped, as it were, in a hood of dark feathers, resembling the shaven crown of a monk partially covered with a cowl. The German name, 'Zopf or Perrücke Taube,' signifies having a wig; and Willughby, in his 'Ornithology,' 1678, says they are called by the Low Dutch 'cappers,' for reasons I have mentioned above. But perhaps the best treatise on the Jacobin is Moore, 1735, who says in his 'Columbarium':—'The Jacobin is ofttime the smallest of all Pigeons, and the smaller still the better.' All fanciers must agree with me that ten years ago the Jacobin was very poorly represented; but latterly no bird has improved so much (except, perhaps, the Trumpeter), and now many almost perfect specimens are to be found. Its general colours are black, red, and yellow; but at large shows very often good whites are to be found. In whites, though we lose a great point—viz., colour, yet a really good white with a pearl eye is not to be met every day. The head, tail, and flight

Fig. 82.—The Jacobin.

feathers of a Jacobin should in all cases be white. There are Pigeons occasionally seen, and are called Jacobins, which are one colour, and I have known instances of all black and all blue. The latter I have kept, and bred blue birds from them with white properties, but never raised anything fit for the exhibition.

"With regard to the number of white flight feathers, it is a disputed point; and, as they say in Lancashire, different folks have different opinions; for my own part, I am satisfied with seven or eight white flights in each wing, though there are fanciers that say a perfect specimen should have ten. This, however, is not an important point; at the same time it must be remembered I am not an advocate for a bird short of white flights. To run through the principal points of a really good bird is more easily done on paper than by breeding, though a well-known fancier and dealer in London—in fact, I have heard him designated a Pigeon without feathers—tells me he finds Jacobins as easy to breed as weeds in his garden, and can rear annually any amount of good birds. The beak should be short and rather stout, with a small wattle, and in many cases you will find the lower mandible dark; this is not a disqualification, though white is preferable. The eye in all cases must be pearl. I have had many good specimens spoilt with either a 'gravel' or a 'bull' eye, and either is in my idea a great fault, and a very unpleasant thing to get into your loft, as it may take years to breed out. The head should be short and well enveloped at the back with closely-arranged feathers of the same colour as the body of the bird, which gives the bird an appearance of having the feathers glued on to the skull, so close should they fit; joining this arrangement of feathers, which is called the hood, should be another range of feathers, reaching down to the shoulders, or rather they should go further, and encroach more to the breast of the bird, forming a chain, or, as the Dutch call it, 'the cravat.' These feathers should be long and close, and the more even and close they are set the more is the bird esteemed. I think the hood and chain are almost the principal points of the head, and give to the bird a very strong resemblance to the portraits of good Queen Bess. In getting this chain we must not lose sight of size, for the larger the bird the heavier ought to be the chain and hood; and I must again remind you that the Jacobin as a Toy, and one of our prettiest Toys, should be small, and the smaller it is the better; in fact, as Mayor in his treatise says, it should be very little larger than a Tumbler. At the bottom of the chain or mane we come to

another point of beauty—viz., the rose, a centre spot of white down, caused by the feathers turning different ways, and with this point, which is a great one, we complete the characteristics of a true Jacobin—viz., the hood-chain, mane, and rose. In olden times a good Jacobin and a really valuable bird was proved when, by taking hold of the bill and drawing the head backwards, the two sides of the chain lap over each other, but this is unnecessary in our present age; and I know of many birds in which the chain not only unites, but crosses over while loose in the pen, and it is in these birds you find the true 'hog mane' so much sought for, instead of the chain going all around the neck and head of the bird, having a roundness at the back instead of a sharp peak, caused by the feathers meeting from either side. Many fanciers want a good specimen to have white thighs, but this I do not agree with, as then the Jacobin carries too much of baldpate; and while referring to them I must say, in regard to the head of the Jacobin, there must be no white feathers under the bill, and on no account so low cut as the baldheaded Tumbler of the present day. In Red Jacobins we frequently find a slaty-bluish-coloured thigh; but I prefer the thighs being of the same sound colour as the body of the bird. Now and then we come across a good bird with white thighs; but at the same time there is a tendency to be low cut in the head, which is a great fault. In the Jacobin I notice many peculiarities of carriage, some literally standing on their tails. This, of course, is a fault, and in spite of all your trouble you cannot keep the bird clean; others are lazy, and mope in a corner of a pen until stirred up with a long pole. What I want in a Jacobin is a small tight bird, with its wings slightly drooping, though not *à la* Tumbler, and then I can see as much carriage and style in a Jacobin as Scotty does in a Ponter. I do not call them good nurses, but still I do not use 'feeders,' and can manage to rear a good bird now and then. One thing I have noticed for many years is the pugnacity of White Jacobins, especially in the breeding season; they seem to master the whole loft, and have a special hatred for a red bird.

"In conclusion I must say I am in a great measure indebted to Mr. Esquilant for my knowledge of a Jacobin; he is well known to us all as a great admirer and successful breeder of this very beautiful variety, and from him, many years ago, I purchased a pair of Black Jacobins, which won, I think, first at Birmingham for three years, besides many cups and other prizes. Though these are gone, I have still the strain left, and intend to do my best to keep this very interesting variety a prominent feature in the Northern Counties Columbarian Society."

[The above interesting paper on the Jacobin is extracted from the American "Fanciers' Journal." It is difficult, of course, to say anything new of an old variety of fancy Pigeons, therefore a great deal of the above is, of necessity, familiar to all readers of the old and of new books on Pigeons; but much of interest is added, and Mr. Royds does not seem to me to write quite clearly about the mane of the Jacobin. He speaks of the "chain or mane." For young fanciers I will explain that the chain is on each side of the neck; the mane is at the back of the neck, and is well called by Mr. Esquilant a "hog mane." This I consider a marvellous beauty in the bird. A stiff line of erect feathers with no notch in them, which the birds have that have no mane, to my mind look as if a bit had been cut out of the feathers by a pair of scissors, whereas the maned birds have a vastly superior appearance.

The rose is also another marked beauty, and best seen, I think, in yellow birds, as the under part of the feathers of that colour show better than that of the black, and yellow is a more delicate and tasty colour than red; hence, perhaps, the yellow Jacks ranked first with the old fanciers. There is another thing to be said for the Jacobin, which can also be said for the Black Mottled Tumbler; the better it is to the eye of a fancier the more pleasing it also is to a non-fancier. It is a bird which pleases at once every eye, whereas Pouters, Carriers, Barbs, and Almond Tumblers must have trained and skilled eyes to see their beauties, which very beauties non-fanciers do not see, but actually dislike. The prize Barb, ladies call a horrid red-inflamed-eyed thing; but the more perfect the Jacobin the prettier it is. Give the small head, the pearl eyes, the close hood, the long chain, and the firm upstanding mane, and the sound colour, it is as delightful a bird to one who does not understand fancy Pigeons as to those who know every property.

This is the same with the good black Mottle Tumbler, and the graceful petite Scotch Fantail. The beauty of each is recognised at a glance by all.—WILTSHIRE RECTOR.]

OWL PIGEONS.

How doctors do differ! aye, and some of them are called fighting men too, because they cannot agree with their friends and neighbours in everything; but without those so-called fighting men we should never detect the imperfections we in common desire to discover and to know, and consequently wish to avoid. I have read in our Journal the debate so far on this subject, and agree with "BUBO;" I agree with him in all but one term, and that is "degenerate."

I do not wish to throw cold water on anyone's hobby, very far from it, but I would like to see the various classes of Pigeons placed in their proper light, so far as we can place them, and to bring out clearly the perfections or imperfections of each bird as the case may be, not only to make sure of the purity of the race of birds we keep and fancy, but of the birds worth our keeping, of their true characteristics, and if possible the original history of each race. This is our sole aim, and for which fortunately the columns of our Journal are open to us.

In a word I think the English Owl is a mongrel bird. Did I say it was degenerated I should allow it had fallen from its normal state, become coarse and otherwise changed by some influence or another; but in using the word mongrel I consider it a crossbred bird. No doubt the true Owl has been one of the original parents of the English Owl, the other may have been a small Blue Dovecote Pigeon, and I think by careful selection I could produce thus a good English Owl in two generations, such a bird as would stand well at a show.

In looking over the large classes of English Owls at our shows I rarely see above a pen or two showing the head of the true Owl, and often all the best of them are coarse, large, and cross-bred-looking, some of the best having very little frill or purl; on the other hand the great bulk are long, or as some will have it, pleasant-faced, many of them with the head and features of a common Pigeon. Most judges I think will admit that while judging classes of English Owls the first thing they look for are the birds that come nearest to the African; should they hit upon such a pen there are few, if any, complaints. If colour is to be taken into account that is a different thing, the worst coloured birds may be the best in the class as Owls. So convinced am I that the English Owl is but a mongrel that I should advise it to be replaced by the African, and then breeders will find that they will produce something worth their labour.

It has all along been my belief (it may be called theory) founded on many years' observation and experience, that the varieties of domestic Pigeons are natives of different parts of the world, and from the fact of the African Owl being unique, and so far as we know coming from Africa only, I am still more confirmed in my opinion.

The African Owl is a brave little bird, he will fight for his place in the Pigeon house against both strong and large odds, he is full of life and activity, and withal he is "gentle as a dove."

The White variety is lovely, his face is far beyond pleasantness, and as a bachelor friend once said, "It is just a thing for kissing." Really there is something melancholy in this saying; but never mind, their exceeding smallness, trim figure, and fine mild expression and habit render them at once the Una of the whole Pigeon family.

I do not know why, but pets seem all the more esteemed if little. Well, the African Owl in its normal state is the smallest of all domestic Pigeons, and therefore must and will become the greatest of all pets in Pigeons. At present it is not much known to the public, but I hope to see ere long large classes of them at our shows.

As to the flying powers of this little bird I have had sorry experience, such as causes me to differ from my friend "WILTSHIRE RECTOR." I would not advise my friend to try it, for most likely off goes a five-pound note, or as Mansie Waugh would say, "Like the flash of the setting sun," it may never be seen again. The bird I lost was watched for a day and night, but proved too sharp for the most cunning hunter.

I agree with my friend that this bird breeds in this country, as I have seen young birds in the nest from imported birds, and these young birds seemed quite as fine as the parents. But I differ in regard to the Trumpeter; they may not breed (imported birds) in England, but certainly they do in Scotland. Mr. Ure I know bred last year six or seven birds from one pair of imported birds. The climate may have something to do with this, but if we can acclimatise the Canary so that it will fly at large and build its nest in a hedge in Scotland, surely we can also acclimatise the African Owl or any other Pigeon.—JAMES HUIE.

A CUTTING-OUT EXPEDITION.

A FEW weeks ago a gentleman and neighbour consulted me about a colony of bees which had been located for many years in the wall of his stable, apparently flourishing, but of no utility to anyone, and a natural desire had grown-up that the lodgers should pay some rent; so I promised to pay a visit of inspection and see what could be done.

I found the wall was a double one with a clear space of 6 or 8 inches between, and divided by perpendicular piers at intervals. The bees entered about 10 feet from the ground, through a large gap which, years ago, had been made, and through which the combs had been removed. The bees had then moved further to the right and set-up their establishment again, notwithstanding the inclement east wind which entered the gap. My advice was that the wall should be further opened and the

combs cut out and removed with the bees into a frame hive, and then their old quarters being bricked-up I had no doubt all would go well.

The plan being agreed on I volunteered to undertake the job, which was then adjourned until the hive was ready and the weather a little warmer. This happy conjunction of circumstances having at length occurred, I and my friend Mr. Cheshire, who kindly offered to assist, last Saturday commenced operations. A plucky bricklayer being in attendance duly attired in a bee-veil, the bricks were quickly removed and disclosed three fine combs about 30 inches by 12 each (as well as some odd pieces), the first of which I soon cut out; and while Mr. Cheshire was cutting and fitting it into the frames I sought for the queen among the large living sheet of bees disclosed to view on the second comb, but without success. This was next cut-out and examined on the other side, then the next, and the next, but still no queen was seen—plenty of brood, and an immense number of bees; but, alas! our new Crystal Palace prize hive did not tempt them to stay, for although we kept the combs the bees flew back, and it became evident her majesty remained in her old quarters. Again and again were the bees swept off and the queen sought each few minutes, showing us the number of bees visible was sensibly diminishing, and it became evident they were disappearing under the roof-plate. A slate or two removed disclosed no tidings of the lost bees, and we began to think our operation would result in a lamentable failure, and the large quantity of brood we had already in the hive was in imminent danger of perishing, when a happy thought struck me: If the mountain will not come to Mahomet, Mahomet must go to the mountain! I ran briskly up the ladder, and the full frames being handed up we made a frame hive of the wall by hanging-up the frames in their old quarters, feeling sure the bees would descend and take possession, save the brood, and be handy to remove another day. Then covering all up snug with some garden mats we left them for forty-eight hours' rest.

On my second visit I found the plan perfectly successful. The combs were well covered with the bees, the queen among them, and having quietly placed them in the new hive without disturbance, had the satisfaction of finding not more than half a pint left behind, which ran up to the roof plate as before, and so were obliged to be left. The wall was then quickly bricked-up, leaving a small aperture till to-morrow for the prisoners' exit. The colony we thus obtained was quite equal to a large swarm in May, and being well furnished with brood and combs I have no doubt will thrive. A few pounds of surplus honey was also obtained for use in the house.—JOHN HUNTER, *Eaton Rise, Ealing.*

BRITISH BEE-KEEPERS' ASSOCIATION.—This Association will hold a conversazione at Burlington House, Piccadilly, in the rooms of the Linnean Society, on Wednesday evening May 5th, when the prize schedule of the next show, which is arranged to take place at the Crystal Palace, September 21st, 22nd, and 23rd, will be discussed.

OUR LETTER BOX.

POULTRY-KEEPING ARRANGEMENTS (*T. M. B.*).—There would have been no occasion to give a large price for a Brahma cock unless you wanted a prize bird. Your description of their roosting place is that of a bad one. If your fowls roost on the bricks or stone shelf they will all have cramp, and many die. Two laying boxes will be enough for six or eight hens. They should be 24 inches square, have a bend in front to prevent eggs rolling out, and should be divided by an upright board 12 inches high. They should be well filled with straw, or the eggs will be damaged if laid on stone. The sitting hens must have a separate place. You will only have trouble and disappointment if you let them sit in the laying house. You may keep a cock and five hens in the space you name, but you cannot rear chickens in it. The perches should be within 24 inches of the ground. If your birds persist in roosting on the ground, you must put down some straw; but we believe if you put proper perches they will take to them. Ground oats or barleymeal are the best food, varied with a little Indian meal, and if their run has no grass the birds must have large sods constantly thrown to them.

CANARY NOTES (*Groundsel*)—1. The wish to obtain Canary eggs from fanciers in the like manner that sittings of eggs are obtained from fowl breeders is in "another street" entirely. The breeders of cage birds are not furnished with eggs in the same proportion as fowl breeders, therefore how would it be possible to supply them when the few eggs the Canaries lay over each nest are required for the birds to sit upon? There would be considerable risk in transmitting eggs from England to Ireland, or elsewhere, either by post or otherwise. 2. We never recommend dealers, and for you to become acquainted with the tip-top fanciers in England we should advise you to purchase the catalogues of some of the principal cage-bird exhibitions held. From time to time you will find the announcements of the shows in our advertising columns. 3. As to the price of pairs of Belgians, Norwich, and Scotch Fancies, much depends upon the quality and breed, and likewise the particular periods and circumstances under which a bargain may be struck. It is not an uncommon occurrence for £3 to £5 or more to be paid for a single specimen of a Belgian bird. A pair of Norwich birds of fair breed might be purchased for 25*s.* and upwards. Sometimes exhibition birds realise fabulous prices. We know an instance last season of ten guineas having been paid for a single Norwich bird. Even if you purchase a pair at a somewhat moderate figure, and breed from the same, you will have to study cayenne before you make headway at a show. Scotch Fancy birds, by the same rule as other breeds, vary much in price. 4. It will not matter about the hen Finch being in the same room as the Goldfinch and Canary, which you say are "caged off." If the Goldfinch becomes paired to the Canary hen, the hen Finch will not draw away his affection for his lady-love. By taking a Canary cock away from a hen he was paired to, and placing a Goldfinch to that same hen at the time she was sitting a nest of eggs, you run the risk of having the nest gradually pulled to pieces by the Finch, and possibly the eggs to become destroyed. Goldfinches are very fond of tapping eggs with their sharp beaks. You will be lucky if you escape all this, and the hen you have taken the cock from does not forsake her nest through grief for her first love. May will be early enough for Mule breeding.

PARROT SELF-PLUCKING (*E. C. O.*).—Give it no bones, meat, or stimulants of any kind, such as capsicums. Feed on bread and milk and fruit only. Let it bathe daily in a dishful of water, but if it declines bathing give it a shower bath daily by pouring over it tepid water through the rose of a watering-pot.

CANARY OR MULE (*Rev. S. A. B.*).—The hen which fights her mate, whether a Mule or a Canary, is of no use for breeding purposes, and the sooner a separation takes place the better, or the continual fighting may terminate in death. A want of thorough practical knowledge is the reason why you cannot "tell a hen Mule from a hen Canary." Mule hens will go to nest, and exercise their architectural skill in the like way as Canaries, and will deposit eggs in their nests the same size as Canary eggs; but they will be found to be unfertile at the end of the thirteen days' sitting. All Goldfinch hen Mules have a flush of colour on their faces, around their beaks, of a brooze-like tint, which point alone is sufficient to decide the matter whether the hen is a Mule. It is not an uncommon occurrence for the uninitiated to suppose a marked or variegated bird to be a Mule.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

DATE.	9 A.M.					IN THE DAY.				Rain.
1875. April.	Barometer at 32° and Sea Level.	Hygrometer. Dry.	Hygrometer. Wet.	Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature. Max.	Shade Temperature. Min.	Radiation Temperature. In sun.	Radiation Temperature. On grass	
	Inches.	deg	deg		deg.	deg	deg.	deg.	deg.	In.
We 21	29 865	61.0	52 2	W.	48.3	74.0	40 2	118.6	36.4	0.291
Th. 22	29 914	40.5	38 7	N.	48 1	44.6	38.8	63 9	40 1	0.010
Fri. 23	29 990	43 2	38.5	N.	45.8	54.4	81 2	100.2	27.1	—
Sat 24	30 289	45 0	38 4	N.N.E.	45.1	53.6	31 8	99 1	27 3	—
Sun.25	30 295	50.2	42.0	N.E.	45.0	55.6	29 3	86.2	25 9	—
Mo. 26	30.194	48 8	42.0	S W.	44 6	61.0	32 2	101.8	28 5	—
Tu. 27	30 035	52 9	47 9	N.E.	45 9	69.2	43.0	114.6	41.2	—
Means	30.076	48 8	42.8		46.1	58.9	35.2	96.3	32 8	0.241

REMARKS.

21st.—Very misty morning, dull after; rain commenced at 7 P.M.; middle of the day warm; but much cooler in the evening.

22nd.—Rain at times all day, cold and dull. Extraordinary fall of temperature since yesterday.

23rd.—A fine day, though rather dull at times, and cold.

24th.—Fine all day, but still cold.

25th.—Fine early, and till 10 A.M., then gradually getting more and more thick and dark, till at 10.30 A.M. it was so dark as almost to require artificial light in the house; this lasted only for a short time, but it was thick and dark all the morning; but from 1.30 P.M. it was fine, and the night starlit.

26th.—Rather hazy early, but soon cleared off, and fine all the remainder of the day.

27th.—Again hazy early, but soon bright and fine.

A fine week; the decrease of temperature on the evening of the 21st being the most remarkable feature.—G. J. SYMONS.

COVENT GARDEN MARKET.—APRIL 28.

WE have experienced a slight improvement in the amount of business transactions; orders from the northern and midland counties being more extensive. The supply of French Asparagus is now becoming large, especially from the south, and advices report a continuance of it. Salading of the usual description is excellent. Heavy consignments of Broccoli are to hand this week, with some abatement in the price among the wholesale dealers.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples..... ½ sieve	2	6	to 3	6	Peaches..... doz.	18	0	to 36	0
Chestnuts..... bushel	10	0	20	0	Pears, kitchen..... doz.	2	0	3	0
Figs ..... doz.	8	0	16	0	dessert..... doz.	8	0	12	0
Filberts, Cobs..... lb.	0	0	2	0	Pine Apples..... lb.	2	0	6	0
Grapes, hothouse..... lb.	10	0	20	0	Strawberries !..... lb.	8	0	16	0
Lemons..... ℔ 100	8	0	12	0	Walnuts..... ℔ 100	8	0	12	0
Oranges..... ℔ 100	5	0	14	0	ditto..... bushel	1	0	1	6

VEGETABLES.

	s	d.	s.	d.		s.	d.	s.	d.
Artichokes..... dozen	8	0	to 6	0	Leeks..... bunch	0	4	to 0	0
Asparagus..... ℔ 100	4	0	8	0	Lettuce..... dozen	1	0	2	0
French..... bundle	3	0	15	0	Mushrooms..... pottle	0	2	2	0
Beans, Kidney..... ℔ 100	2	0	3	0	Mustard & Cress..punnet	0	2	0	0
Broad..... bushel	0	0	0	0	Onions..... bushel	3	0	6	0
Beet, Red..... dozen	1	0	3	0	pickling..... quart	0	6	0	0
Broccoli..... bundle	0	9	1	8	Parsley..... doz. bunches	6	0	8	0
Brussels Sprouts ½ sieve	0	0	0	0	Parsnips..... ... dozen	0	9	1	0
Cabbage..... dozen	2	0	3	0	Peas..... quart	4	0	7	0
Carrots..... bunch	0	6	0	8	Potatoes..... bushel	2	8	5	0
Capsicums..... ℔ 100	0	0	0	0	Kidney..... do.	8	0	5	0
Cauliflower..... dozen	4	0	8	0	Radishes.. doz. bunches	1	0	1	6
Celery..... bundle	1	6	2	0	Rhubarb..... bundle	0	4	0	9
Coleworts.. doz. bunches	4	0	6	0	Salsafy..... bundle	1	6	0	0
Cucumbers..... each	0	8	2	0	Scorzonera..... bundle	1	0	0	0
pickling..... dozen	0	0	0	0	Seakale..... basket	2	0	3	0
Endive..... dozen	2	0	0	0	Shallots..... lb.	0	3	0	4
Fennel..... bunch	0	3	0	0	Spinach..... bushel	0	0	4	0
Garlic..... lb.	0	6	0	0	Tomatoes..... dozen	0	0	0	0
Herbs..... bunch	0	3	0	0	Turnips..... bunch	0	6	0	0
Horseradish..... bundle	0	0	4	0	Vegetable Marrows..doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	MAY 6—12, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m.	h.	Sun Sets. m.	h.	Moon Rises. m.	h.	Moon Sets. m.	h.	Moon's Age. Days.	Clock after Sun. m.	s.	Day of Year.
6	Th	London Institution at 7 P.M.	62.3	38.5	50.4	25 af	4	28 af	7	29 af	4	25	9	1	3	34	126
7	F	Royal Institution at 8 P.M.	60.3	39.4	49.8	23	4	30	7	0	5	54	10	2	3	39	127
8	S	Royal Botanic Society at 3.45 P.M.	64.8	40 7	52.7	21	4	31	7	46	5	morn.		3	3	42	128
9	Sun	Sunday after Ascension.	66.0	43 3	54.1	19	4	33	7	51	6	6	0	4	3	46	129
10	M	Geographical Society at 8.30.	65.7	41.0	53.4	18	4	35	7	9	8	58	0	5	3	49	130
11	Tu	Royal Medical and Chirurgical Society at 8.30.	66.2	42.2	54 2	16	4	36	7	32	9	32	1	6	3	51	131
12	W	Royal Horticultural Society, Fruit and Floral Committee—Pot Rose Show. Society of Arts at 8 P.M.	67.0	42.7	54.9	15	4	38	7	55	10	54	1	☽	3	52	132

From observations taken near London during forty-three years, the average day temperature of the week is 64.6°; and its night temperature 41.1°.

HARDY EARLY SPRING FLOWERS.

OF late years one of the most popular pursuits in gardening has been the cultivation of spring flowers, and to such an extent has this been followed by some, that as much trouble is taken and as much interest is centered in the "spring bedding" as in that which follows in the summer. I find no fault with its being so, and where the means are forthcoming both may be accomplished pretty well. Furthermore, there is something especially cheering in the presence of spring flowers, and the earlier they can be had the better; and if those who cater for us could increase the number of really early-flowering plants of a pleasing colour and easy culture they would accomplish an object of more value than by issuing new varieties of Golden and other bedding Geraniums. Really early-flowering plants are but few, and the spring gardening, as it is often miscalled, is allowed to straggle on into the early summer, many of the plants now used for the purpose not flowering until May. In the country spring flowers may be met with in every coppice or hedgerow—the wild Hyacinth, Gorse, May, Cuckoo-flower, and many others, which all tend to lessen the value of the parterre at that time, however gay it may be with Pansies, Forget-me-nots, Silenes, Violas, and the many interesting annuals that flower at this season; so that it is more important for cultivators in rural districts to patronise the earlier class of flowering plants, leaving it to the caterer for town or suburban flower beds to cultivate the later-blooming kinds, as he will have less immediate competition from Dame Nature, and will have the field more to himself.

Of course the requirements of certain places point out what has to be done, but I have often thought that spring gardening as it is frequently met with is not so important as it is often thought to be when trees and shrubs of so many kinds are all in their best garb, and Nature's flowers competing for floral honours at the same time as the beds of the parterre which they surround. But I fear it is something like sedition to speak against spring gardening in any form; I will therefore urge on all to try and encourage the cultivation of earlier-flowering plants, and see if by cultivation flowers cannot be coaxed to precede those which are growing wild. Here I admit our materials are as yet limited, but I hope to see them augmented by plants not yet thought of. I should like to see something like a system or plan of providing flowers from January down to the time the cuckoo makes its appearance. Of such early flowers my list is a meagre one, and is no doubt capable of being supplemented by many readers.

I have never been able to make much of the Christmas Rose (Helleborus niger), which with me seems to flower best when nestling underneath some tree or shrub, and has not been disturbed for some years. Winter Aconite (Eranthis hyemalis) is more convenient, and bears removal much better; but that I have also grown mostly as edgings to Rose and other beds, where it enjoys a permanent position; still it is available for the temporary purpose of ornamenting the beds, for even after it has done flowering its foliage presents an agreeable appearance, which is not the case with all plants.

We next come to the Snowdrop; and I am much surprised this plant is not more patronised both in public and private gardens than it is, for it is certainly one of the most convenient of all early spring flowers, and bears transplanting at any period of its growth. With us it is mostly planted when it is in a growing state, tufts of it being taken up soon after it makes its appearance above ground, as well as when it is in full flower or afterwards; but where it is intended to do duty the same season I would recommend its being planted in tufts that may be about an inch or so high, when it will flower and do well at once. Having so many masses of shrubs edged with it, very often on the turf, as well as walks through shrubberies or under trees where nothing else will grow, we do not use it much for beds; still it may be available for that purpose. I may add here for the information of those who have not tried the Snowdrop under trees, that it is an excellent plant to form embroidered figures and any kind of fancy work, which looks very pretty on places where the herbage is confined to Pilewort and a few other weeds of a like kind, which scarcely present any signs of life when the Snowdrop makes its appearance. If planted thinly it does not require altering for some years. Where walks lead through shrubberies or under trees where only a few bulbs make their appearance, and where the edging of the walk is defined by a stone or brick kerbing, the Snowdrop may be planted in a line about a foot from the side of the walk, and answers admirably; neither is it unsightly after flowering, for the foliage curving gracefully over to both sides looks both fresh and orderly. When grown on grass it is better not to mow until it shows tokens of decay setting in, which is usually about the middle of May or earlier.

I have never been able to make much of the Crocus, which with me has always fallen a victim to mice or other enemies, that excepting in some detached patches (and these every now and then being destroyed), I have done very little in outdoor decoration with them. I regret this much, for the many colours we have of this bulb would make it very acceptable. I may add that rabbits are fond of the foliage when it is in a growing condition, although they do not meddle with the Snowdrop nor common Daffodil further than mischievously scratching them up occasionally.

We now come to the important Primula family, amongst which are some of the most serviceable of all our spring-flowering plants. Notably so is the single white Primrose and the single mauve, both being early, the first-named often flowering profusely in the autumn and up to Christmas if the weather be mild. The two varieties above mentioned may be classed amongst the early-flowering plants of the year. Next follows the wild or common Primrose, after which the single crimson, violets, and other intermediate colours, most of which, especially the

crimsons, have a tendency to run into the Polyanthus form. Amongst several hundred plants I have of a rather pretty and bright crimson all have the tendency to sport in the manner described; they are earlier than the ordinary Polyanthus, and also earlier than the double-flowering Primrose, and on the whole flower more abundantly. The double varieties when well grown flower freely also; but my collection of these is limited to the white, yellow, and lilac. The greatest favourite here is the Hose-in-hose Oxlip, which I fancy is not generally known, and which when well grown is more densely covered with bloom than any variety I know of, and that, too, of a bright clear yellow, not the pale hue of the ordinary Primrose. Unfortunately it does not seem to perfect any seed with me, neither does a pretty lavender-coloured Polyanthus which forms a strong contrast to it, and is equally admired for its free-blooming qualities as for its colour. But I fear I must exclude the whole of the Polyanthus family from the section of very early-flowering plants, for April is usually far advanced before they are at their best. The single white Primrose, however, is usually the earliest of all winter-flowering plants, and being of a neat and compact habit, is available for most places where the Primrose is required.

Erica carnea and herbacea are useful and highly ornamental plants. I confess not to have used them much for winter-decorative purposes in the way of filling empty beds, for the reason that we have plants growing elsewhere in a permanent manner, so that it is not wanted for the temporary purpose of replacing the Geranium and other summer-flowering plants. I have no doubt it can be used to advantage, and more especially with those who have a congenial soil for it to grow in. The plant is so very accommodating that it thrives in most places, and is amongst the earliest flowers we have. It is very hardy and second to none for compactness of habit and profusion of flowers, and as these stand all weathers it may be set down as one of the most useful and becoming of all early flowers.

Daffodils and other Narcissi are beautiful and interesting plants, but I have my misgivings about recommending them for beds, and would rather advise their being planted in some less conspicuous place, as in the fronts of shrubberies or underneath trees near to walks. They are also suitable for the mixed herbaceous border, and even now and then amongst grass in places where the scythe is not likely to cut them down before their foliage begins to decay. All such places where not too dry answer very well for the common Daffodil, its presence in such places is more becoming than in the parterre.

Forget-me-not and Arabis albida. For many years I have grown these two plants rather extensively, as being a very good match in habit and widely diverse in colour. Usually the first flowers on each are not more than two or three days apart. The Forget-me-not, which with me is the dissitiflora species, is the most attractive when examined closely. When in the pink condition, which is the garb it first of all puts on (and this season was very late indeed in shaking off), it is certainly not so good as the Arabis. But it is idle making a comparison since both are wanted, and being widely dissimilar colours they cannot compete with each other. I am, however, uncertain whether to class them in the list of very early flowering plants, as they are very rarely at their best until April, and in some seasons like the present not until the latter end of it. Their utility as representing masses of blue and white in the most compact form cannot be too highly commended.

Pansies and other Violas. I confess not to have employed the Viola to the extent I find others have done. With me it only blooms in the early summer months. I allude to V. cornuta and its varieties. Pansies are apt to go off entirely during the dry summers we are frequently visited with. One or two popular varieties, notably the Cliveden Blue, is extremely pretty later in the spring and deserves the highest praise, as also does a yellow one having only a local name, and not conforming to the conditions laid down for a florist's flower. The whole family are, however, useful, or at least the kinds usually met with in cultivation are all admired; and for furnishing beds near to walks much frequented they may be planted with advantage.

Hepatica is on the whole a more serviceable plant when occupying a permanent position in the herbaceous border, as I have never met with it in a good condition where it had to endure transplanting twice in a year. With me it does not thrive very well. The single blue is my favourite.

Daisies are much too late to be classed in the list of very early flowers, and I fear the assumed improvement made in them has not been in the direction of earliness. They are, however, extremely pretty in May. The clear white and dark red being in my opinion more showy than the intermediate colours.

Saxifragas. These plants are more remarkable for foliage than for flowering; but S. crassifolia looks well in winter, besides having a fine spike of rose-coloured bloom in the early part of April. The most of the other species are more showy in their foliage than in their flowering, and may be treated of hereafter.

Helleborus fœtidus. Like the last, this plant unites the twofold recommendation of being good in appearance as a foliaged plant, and by its flower being interesting. When in flower it is 18 inches high or more, but being clothed with Palm-like foliage of a dark-green colour to the ground its appearance is handsome at all times. In hardihood it is second to none, standing as it does equally well in the open bed or elevated vase. For winter and early spring gardening I have for many years placed this plant first, and have not seen reason to alter my decision.

Amongst other early-flowering plants much to be admired is Alyssum saxatile, especially a dwarf variety of it of a bright golden yellow, and enduring the sun much better than Cheiranthus Marshallii, besides being earlier, still not early enough for this list. Neither are the Wallflowers nor any of the various annuals, which are exceedingly useful in their way, but comparatively few flower before May. Bright clear-coloured flowers on tidy-looking plants which flower before April seem desirable, and experience of such plants would be valuable.

I should say that everything recommended for early decoration should precede the Polyanthus. This being a widely known plant may be placed as denoting the demarcation between the early and late spring-flowering plants. For late spring we have no lack of choice, but any addition to really early flowers will be very acceptable.—John Robson.

AIDS TO FERTILISATION.

The winter, which we may now hope is almost gone, has been a very trying one for the forcing gardener, not on account of the severity of the weather, for with one notable exception (31st December), when the ground was beautifully and effectually covered with Nature's blanket, we have had no severe frost, but because of the absence of sunshine. Caloric we can manufacture, daylight we cannot, and without the latter the former is comparatively useless for plant life. You may have elongation without sunlight, but it can scarcely be called growth, and when at last sunlight does come, the plants will suffer as much from it as they had previously done from its absence.

Probably one of the greatest difficulties this season has been with the fertilisation of flowers, such as Peaches, Strawberries, and Vines. Before this is forgotten I should like to invite those who have had difficulties, and partial failures, to think over the matter a little, with a view to being better prepared to meet such difficulties in future.

The following remarks are merely intended to be suggestive, as I have not time now to go deeply into the matter if so inclined, and, besides, I would rather encourage our rising young gardeners to think for themselves than lay down laws and rules for them to follow without reason. Exceptional seasons like this go far to prove who are the thinking and reasoning gardeners, and to divide them from those who blindly and mechanically copy their forefathers. Copying a good master is all very well when the conditions and requirements are the same; but a little variation in the conditions or requirements will often upset the whole affair, and the copying pupil is lost in a maze.

What are the conditions generally favourable to the fertilisation of flowers? And when the conditions are unfavourable how can we best assist Nature to perform her functions? First of all we must have mature growth. You might as well try to keep-up a supply of Mustard and Cress without seed as to force Grapes, Peaches, and Strawberries where the buds and crowns were not matured the previous season. Have good, plump, ripe growth, and you can afford to smile at those who tell you that the plants require rest. As a rule plants rest only to accommodate themselves to the seasons. The growth once matured the plant is immediately able and willing to start afresh if introduced to a suitable climate natural or artificial.

Healthy, but not rampant, root and leaf action are an ab-

solute necessity to fertilisation. A genial atmosphere should be maintained—certainly not a dry and hot one, as is so often recommended in our gardening periodicals, but one containing sufficient warmth to prevent anything like stagnancy, and enough moisture to prevent flagging. Cold draughts should not be admitted. When there is no sunshine, a very little warmth in the pipes and the smallest aperture at the apex of the roof will give quite sufficient buoyancy to the air of the house. In the case of Vines and Peaches a gentle shake of the trellis will help to distribute the pollen.

I do not think it at all necessary to touch the flowers with the hand or any implement, and I firmly believe that there is more harm than good done by it. The little caps which cover and protect the blooms of Vines always fall off mine at the proper time, and why should they not do so with other growers? The little globules on the stigma, so much talked of and written about, do not prevent impregnation here, and I cannot quite understand why they should do so elsewhere.

Peaches will generally set well enough if the flowers are perfect and the atmosphere suitable. If the flowers are not perfect something besides is probably wrong; and if by any scheming you can make them set artificially, it is not at all likely you will force them to ripen good fruit.

This season for the first time I have found ants damaging flowers and fruit. I always thought before that they did no more than dance attendance on the green fly. Now as I have no green fly for them they have revenge by sucking the juices of the flowers. I have had Peach and also Melon flowers entirely destroyed by them, and now they are trying the flavour of the ripe Strawberries. I have read that toads will destroy ants. We have plenty of toads, but they do not care at all for such small fry, they prefer worms and wasps. A dozen wasps is nothing unreasonable for a hungry toad, and I must therefore think it would take him a long time to make a meal off ants. But to the flowers.

I ventured to hint in a former paper that the impregnation of the Strawberry was a sort of compound affair, that to have a perfect fruit it is necessary for all the little hair-like organs in the centre of the flower to be impregnated, and where these are not impregnated the seeds will not be formed, and the fruit will not swell in that particular part. This is the cause of badly-shaped fruit. Each seed affects the swelling of the fruit about an eighth of an inch all round it; if there is a space of more than a quarter of inch, when the fruit is fully grown without a perfect seed there will be a malformation. These observations are taken from Keens' Seedling. Some varieties may have the seeds closer and some further apart. I have lately had more proof of the above than I wished for. During the sunless weather of March, when we could not keep sufficient warmth in the pipes in the Strawberry house to make the air buoyant without raising the temperature too high, I took the precaution to fan the flowers once every day for a time when they were fully expanded. It was done with my hat as being the most convenient, and I am sorry to say I spoilt the shape of it. I gave it a sharp whisk before the flowers so as to cause them to move without touching them. The effect was plainly visible in the shape and appearance of the fruit. As the season was advancing and the days growing longer, I left the next succession batch to take care of themselves, and a lot of miserable, ugly, deformed fruit was produced, such as I was glad to see the last of. I now put my man in charge up to the fanning dodge, and the fruit again was all that could be wished for. In ordinary seasons a knowledge of this practice is of no consequence, but in a sunless season, like the present one has been till lately, I think it of the greatest importance.

It is interesting to observe how beautifully Nature provides for the fertilisation of the Strawberry flower. The outer stamens are longer than the inner stamens, and soon after the petals expand these longer stamens may be seen bending over so as to cover the tip of the future fruit. They remain there till the little vessels burst and distribute the pollen, and then almost immediately they recede and begin to decay.—William Taylor.

Philadelphia International Exhibition of 1876.—The applications for space in the British section of this Exhibition are numerous and of a satisfactory character. In consequence, however, of arrangements recently communicated by the American authorities, whereby the time for foreign commissions to make definite application for amount of space required is extended, it will be possible for the British Executive to receive applications from intending exhibitors, addressed to 5, Craig's Court, Charing Cross, London, up to the 15th of May inclusive.

ALPINE AURICULAS.

This alpine beauty, so developed by the labour which has been bestowed on it, more especially in years gone by, has indeed acquired an extravagant diversity of minutely exquisite tints—considering the limited variations it was originally known to possess in its wild state—blending in what are termed variegated flowers in a really marvellous manner, and forming a pleasing contrast to those of one colour known as selfs, the plant varying also in a yellow or white eye. As if its beautiful shades of colour alone did not demand for it universal attention, it also yields a delicious Primula-like scent.

My object in penning these few lines in favour of the alpine Auriculas is not so much to explain how they should be grown, for this has often been done by many able and experienced writers. I would rather speak of the adverse circumstances under which they (the flowers) may be cultivated, and the rough treatment they will survive, their independent character thus bringing them under the class of hardy perennial bedding plants. And yet how seldom are seen in private gardens more than one or two different varieties of the Auricula. As far as my experience goes they are of much easier culture than is generally supposed. It has been said that damp and full sunshine are their ruin.

My interest in this flower was first awakened by the surprise I felt at seeing it grown under great disadvantages, its beauty changing a very unattractive spot into one of marvel. This was a tiny walled-in garden or court facing the south—a receptacle, as may be supposed, for every kind of domestic odds and ends, being tenanted by an old mechanic in the narrow street of an uninviting part of a country town. I was assured this plot had no artificial assistance from manure, nor protection from sun nor wet. It was a light soil of poor character yet nurtured the Auriculas, which were produced there in nearly every shade of their colour. One of the most striking points was the nearness in which the plants were grown—literally touching each other on all sides. At length I had the good fortune of obtaining a collection of these April-blooming treasures, but at a period which necessitated a double move for them; each time they were stripped of all earth attached to their roots. The end of May was the date of their first transition, and September was the second. The latter time they were fully three days out of the ground, being then planted where they now stand, in a poor, sandy, stony soil, unsheltered from the elements, it being a high, exposed, and dry situation.

With all this their principal enemy is the cockchafer grub, which eats the roots here by wholesale in May, through which I lost a quantity of plants in the summer of 1874. With the exception of a tolerable amount of decayed farmyard manure in the autumn, and a dressing of soot in the early spring, with one later addition of a little liquid manure, they have had to look out for themselves, and where there is a plant that was left unmolested by the cockchafer grub it looks robust. Those that are smaller though now healthy have all suffered from its ravages. These pests eat the roots bare to the surface of the earth, for which I know no prevention. Some of the plants now blooming I had for two years previously on a dry bank facing the south, but shaded. The soil was stiff loam, in which they bloomed fairly, but made little growth, though still alive to tell the tale. In truth the tale they all tell is one of which I can never tire, for there seems daily a new attraction in their contemplation, in comparing their beautiful shades of purple, lilac, crimson, pink, maroon, yellow, and white. I have sent you a few pips of about fifty different flowers, which will show that with all their adverse circumstances they still have something to boast of.

I mention all these facts merely to demonstrate that Auriculas can be grown in many places where now, I believe, it is considered out of the question. If I had such a spot at my disposal I would select a rather shaded, moist, but well-drained bed for them, which is exactly the reverse of their present position in my garden. This is only one of the many beautiful hardy flowering plants that surely will again before long take a more prominent place in our gardens.—Henry W. Cooper, *Surrey*.

[The flowers which Mr. Cooper sent us were very varied in colour, large in size, and of good form. Our experience of these border Auriculas confirms what Mr. Cooper says, for they are among the most gay and hardy of our spring flowers;

and the improvement which has taken place in production of new varieties has of late been quite marvellous.—Eds. J. of H.]

EXHIBITION OF CLEMATIS AND ROSES AT THE ROYAL BOTANIC SOCIETY.

In the Society's gardens, Regent's Park, are now arranged what may be termed private exhibitions of the two finest hardy garden plants we possess—viz., the Rose and the Clematis. We will first glance at the

Clematises staged by G. Jackman & Son, Woking Nursery, Surrey, which are arranged in the conservatory corridor. Some idea may be formed of the collection when we state that it is composed of four rows of plants, each 60 yards in length, and numbers nearly four hundred specimens. Most of these are spherical masses of bloom 3 feet and more high and through, the front row being of smaller-sized plants, yet richly laden with flowers. The effect produced is exceedingly imposing and gay, yet is destitute of any approach to mere glare by the preponderance of neutral tints which pervades the collection.

We note as a few of the best:—Sir Garnet Wolsley, a splendid plant, a rich glow of crimson pervading the flowers by the broad centre band of that colour on a mauve ground. The Queen, a broad-sepalled variety of great merit, lilac, with claret stripe. Stella, an imposing light variety, with large blush flowers and sweet-scented. Ada, glossy mauve with a rosy band, very chaste. Lord Mayo, similar to Stella, but more lively, an effective variety. Patens floribunda, a tinted flesh-colour, suffused with lilac deepening to the centre; a fine but rather loose flower. Miss Crawshaw, a large flower of rosy hue with a beautiful satiny gloss on the sepals. Lord Derby, deep lavender shading to mauve, attractive. W. E. Everington, rich maroon with crimson band, an early dark variety, distinct as a cross between the early and late blooming class. Fair Rosamond, blush white, with a fainted red bar and distinct stamens; a fragrant variety. Aurelliana, deep lilac, a small but attractive variety; very free. Mrs. C. S. Baker, French white and claret. Vesta, a light sweetly-scented variety. Miss Bateman, still one of the best of the whites, and good examples of the excellent varieties Albert Victor, Lady Londesborough, Angelina, Rubella, &c. The above represent the cream of the splendid collection of single flowers. Countess of Lovelace is the best double variety, being a better colour, with larger flowers, and is altogether superior to John Gould Veitch. Lucie Lemoine, the double blush variety, is a fine companion plant to the foregoing. We cannot too strongly recommend the extended cultivation of this class of plants both for conservatory and garden decoration, and we especially advise all who can do so to see this admirable and complete collection for themselves. It continues until the 25th inst. Passing through the grounds we find the

Roses of Mr. Wm. Paul of the renowned Waltham Cross Nurseries arranged under canvas, in what was once the American or Rhododendron garden. The enclosure is about 50 yards square, and the space is laid-out in curving walks, surrounding raised beds and banks edged with grass verges. On these elevations are arranged about three thousand plants, principally Roses, yet interspersed with choice shrubs, specimen Ivies, Maples, Yuccas, &c.

Unlike the Clematis exhibition, which is a veritable bank of flowers, this collection of Roses, and auxiliaries, are arranged with the utmost natural freedom, and affords a stroll of much interest and beauty, and an atmosphere redolent with delicious perfume. It does not remind one of a mere set show so much as of a beautiful garden of Roses where each plant can be examined separately and apart from its neighbour. These plants are in all shapes and sizes. There are standards and dwarfs, huge pyramids 7 feet high, and globular masses of bloom of compact size and symmetrical form.

Amongst the giants are Souvenir d'un Ami, 7 feet by 6; Charles Lawson, 6 feet by 4; Madame Willermoz, 6 feet by 5; Céline Forestier, 6 feet by 5; Glory of Waltham, 5 feet by 4; with lesser, still fine rounded examples of Alba Rosea, Victor Verdier, Comtesse d'Oxford, fine; Duke of Edinburgh, Marie Van Houtte, Mdlle. Thérèse Levet, very fine blooms; Madame Lacharme, extra; Princess Beatrice, a fine globular Rose, and sweet; Marquise de Castellane, exceedingly good; La France, very fine. All these are heavily laden with blooms.

Smaller plants of the following are prominent by their excellence:—Madame Nachury, fine bold flowers; Peach Blossom, a sweet and excellent garden Rose; Catherine Mermet; Perfection de Montplaisir, a bright canary yellow; and Star of Waltham, exhibiting fine vigour of constitution, massive foliage, and rich blooms.

Altogether the collection of Roses is a very excellent one, some plants being remarkable for a large number of medium-sized flowers, some for a few blooms of splendid finish, some for richness of colour, others for delicacy of tint, and all for the cleanliness and health for which Mr. William Paul's plants are proverbial.

Besides the Roses are attractive groups of Pelargoniums, a bed of silver-edged varieties with white flowers being especially noticeable. The best of these is, perhaps, Mont Blanc, closely followed, however, by Imogene, Mountain Maid, Virgin Queen, and Waltham Bride. This group has an exceedingly chaste effect. The best of the silver tricolors are Miss Farren, free and good; Madame Patti, compact; Lady Dorothy Nevill, bright; and Princess Beatrice. Plutarch is one of the best gold tricolors, being bright and of good substance; and Midas, a gold bicolor, is a smooth, clearly-defined, high-coloured variety. Altogether the Exhibition is worthy of the effort and enterprise of the promoter, and more need not be said. It continues until the 10th inst.

NATIONAL AURICULA SOCIETY'S SHOW.

The above was held on April 27th, and was so arranged for as to form one feature, and that a distinctive one, of the Manchester Botanical Council's Exhibition in the Town Hall, King Street.

It is much to be regretted that the supply of daylight, which has never a very high illuminating power in Manchester, should be so insufficient for a flower show here. At farthest from the windows it seems mere twilight; and though bright Orchids may shine through such a gloom, and Roses, Azaleas, and Rhododendrons, by sheer force of floral power, make their presence felt, yet smaller flowers with such tender touches and curious shades of colour as characterise the florist Auricula suffer much in a defective light. I have stated this in great measure for the sake of defending the Auricula from a possible charge that it does not come out so well as might be expected at an exhibition. In want of a fair light it cannot; but lovely as it is under all exhibition advantages, it is never so pretty as at home in a cool dustless air and carefully adjusted light.

The Show of the 27th was as good as any of us had expected it could be after the tedious spring. The whole growing season has been very difficult for Auriculas, and they have required care during the long continuance of dry cold winds at the time when the stems were rising and the buds swelling. Hardy as the Auricula plant itself is, the blossoms are most tender, and the shortest chill upon the opening flowers will stop them in their progress and cause them to "set"—*i.e.*, remain fixed in the position they were in when subjected to the check. My late notes upon Auriculas will, I trust, render it unnecessary that I should in the Journal repeat them.

I was too busy to thoroughly enjoy the Show, but two fresh varieties in selfs were noticeable. One of them, raised by Mr. E. Pohlman of Halifax, and now named Ellen Lancaster, is a very intensely dark flower of fine outline and rich flat petal, paste not quite circular, and might with advantage be broader and denser; but in a kinder season the flower may improve in this last quality, and, indeed, has been seen in better condition, and very fine. The other self is Charles Perry, one of the blues, the best of them all in breadth, roundness, and flatness of petal and in richness of colour, which is a very desirable one. Like them all, however, the tube is very pale; it seems a weak point in all the flowers of this colour, so that the first good blue we can raise with a golden tube will be a great catch. Charles Perry has come out through Mr. Charles Turner, but the dark self is not yet let out, though it has passed from the raiser's hands.

One point of interest connected with the Show which I would notice with most pleasant recollection was the meeting of florists after the Show. We always draw together at some appointed place after such exhibitions as the National Auricula, Tulip, or Carnation and Picotee Society, and our smaller shows have also their more local gathering. But this time we were richer than usual in the presence of florist friends from very far, and very greatly it added to the good cheer of the day to meet those hand-to-hand with whom one had but corresponded hitherto. A little knot among us who had been thus related had a hearty laugh together as we confessed among ourselves that we had found we were all younger and heartier men than we had supposed one another to be. I trust that many a like re-union awaits us. They are happy meetings, and one of the many pleasures we derive from the simple source of flowers, and they are by no means the least pleasurable part of an exhibition.

I am sure I speak for all my brother "Northerns" when I say we feel the sympathy and help of brother florists in the south and over the water as far as Ireland, and I trust that all

the friends who met us the other day, some for the first time, will think one line from Tennyson may describe us well—

"Dark, and true, and tender is the north."

AURICULAS.

Class A. Six dissimilar.—1st, Rev. F. D. Horner, Kirkby Malzeard, Ripon, with Prince of Greens, Smiling Beauty, George Lightbody, Complete, Regular, Pizarro. 2nd, Charles Turner, Royal Nurseries, Slough, with R. Trail, Alderman Wisbey, Colonel Champneys, George Lightbody, Cygnet, Charles Perry. 3rd, H. Wilson, Halifax, with Colonel Taylor, Imperator, Favourite, George Lightbody, Pizarro, Othello. 4th, S. Cooper, Timperley, with Imperator. Lovely Ann, Ann Smith, John Wateston, Mrs. Sturrock, Parker's Metropolitan.

Class B. Four dissimilar.—1st, C. Royds, Rochdale, with Imperator, Smiling Beauty, Conqueror of Europe, Mrs. Lancaster. 2nd, Rev. F. D. Horner, with Smiling Beauty, George Lightbody, Bolivar, Mrs. Sturrock. 3rd, S. Cooper, with Imperator, Taylor's Glory, Conqueror, Pizarro. 4th, Charles Turner, Alderman Wisbey, Privateer, Arabella, Blackbird.

Class C. Dissimilar Pairs.—1st, C. Royds, with Imperator, Mrs. Lancaster 2nd, Rev. F. D. Horner, with Prince of Wales, George Lerrick. 3rd, E. Elliott, Rochdale, with George Lightbody, Pizarro. 4th, R. Lord, Todmorden, with Colonel Taylor, Pizarro.

Green edges, single plants.—Premium, R. Lord, with Colonel Taylor; 1st, Rev. F. D. Horner, with Colonel Taylor; 2nd, R. Lord, with Imperator; 3rd, Rev. F. D. Horner, with Lady Wilbraham; 4th, Rev. F. D. Horner, with Apollo (Beeston's); 5th, C. Royds, with Lovely Ann; 6th, R. Lord, with Trail's Anna; 7th, Charles Turner, with Hertfordshire Hero; 8th, C. Royds, with Prince of Wales.

Grey edges, single plants.—Premium, Rev. F. D. Horner, with Kay's Meiklejohn; 1st, Rev. F. D. Horner, with George Lightbody; 2nd, Rev. F. D. Horner, with Complete; 3rd, R. Lord, with Charles Brown; 4th, S. Cooper, with R. Trail; 5th, Rev. F. D. Horner, with Kay's Meiklejohn; 6th, J. Rowland, Prestwich, with Alma; 7th, — Mellor, Ashton, with Conqueror; 8th, Rev. F. D. Horner, with Ne Plus Ultra.

White edges, single plants.—Premium, Rev. F. D. Horner, with Catharina; 1st, E. Elliott, with Catharina; 2nd, C. Turner, with Omega; 3rd, H. Wilson, with Smiling Beauty; 4th, C. Turner, with R. Headley; 5th, R. Lord, with Bright Venus; 6th, R. Lord, with True Briton; 7th, E. Elliott, with R. Trail; 8th, Rev. F. D. Horner, with Taylor's Glory.

Selfs, single plants.—Premium, Rev. F. D. Horner, with Othello; 1st, R. Lord, with Pizarro; 2nd, C. Turner, with C. Perry; 3rd, R. Gorton, Eccles, with Topsy; 4th, Rev. F. D. Horner, with Lord Lorne; 5th, H. Wilson, with Garibaldi; 6th, H. Wilson, with True Blue; 7th, J. Rowland, with Lord Clyde; 8th, R. Lord, with Meteor Flag.

Best Green edge in the Exhibition.—R. Lord, with Colonel Taylor.

Best Grey edge in the Exhibition.—Rev. F. D. Horner, with Kay's Meiklejohn.

POLYANTHUS.

Pairs dissimilar.—1st, J. Rowland, with Lord Lincoln and Exile; 2nd, T. Mellor, with Cheshire Favourite and Exile.

Single Plants.—Premium, J. Rowland, with Cheshire Favourite; 1st, D. Jackson, Middleton, with Lincoln Seedling; 2nd, — Mellor, with George IV.; 3rd, Rev. F. D. Horner, with a seedling; 4th, J. Rowland, with Exile; 5th, J. Walker, Sheffield, with a seedling; 6th, — Jackson; 7th, R. Lord, with Cheshire Favourite; 8th, T. Mellor, with Exile.

ALPINE AURICULAS.

Yellow Centres.—Premium, C. Turner, with Bessie Ray; 1st, S. Cooper, with Nimrod; 2nd, S. Cooper with Ovid; 3rd, R Gorton, with Alice; 4th, R. Gorton, with Diamond; 5th, R. Gorton, with Dolly Varden; 6th, C. Turner, with Bronze Queen; 7th, R. Gorton, with John Leech; 8th, C. Turner, with Evening Star.

White Centres.—Premium, R. Gorton, with Mauve Queen; 1st, S. Cooper, with George Lightbody; 2nd, R. Gorton, with Miss Reed; 3rd, R. Gorton, with Beatrice 4th, C. Turner, with Castalia; 5th, R. Gorton, with Purple Emperor; 6th, R. Gorton, with Consolation; 7th, J. Wild, Middleton; 8th, R. Gorton, with George Lightbody.

—F. D. Horner, *Kirkby Malzeard, Ripon.*

FORTUNE'S YELLOW ROSE.

We have received from Mr. J. Muir Dowie a "few buds"—really attractive button-hole flowers—of Fortune's yellow Rose. This Rose was introduced from China by Mr. Fortune in 1845. It was not issued with a flourish of trumpets, but, on the contrary, it was somewhat disparaged as a shy-blooming Tea Rose of weak constitution. That it is not shy-blooming is evident, and as to its delicacy it has lived thirty years without exceptional nursing. In reality it is a good, free, and attractive Rose; but to see it to advantage it should be grown on the roof of a greenhouse or conservatory, where its pendent blooms are conspicuously beautiful. The colour is a rich coppery buff; buds elongated; foliage very bright, abundant, and almost evergreen. As a roof-covering plant it is very recommendable, and is in a fair degree hardy as a wall Rose in the open air. We are glad Mr. Dowie has directed attention to this too-much-neglected Rose, which he evidently grows so well.

AURICULAS AT THE ROYAL BOTANIC SOCIETY.

As Secretary of the Metropolitan Floral Society it is my duty to say a few words as to our little exhibition of these lovely spring flowers, and I only wish that I could speak more encouragingly of the increase of interest in them than I am enabled to do. Why is it that in the south we cannot induce persons to grow them? Mr. Ball, Mr. Charles Turner's able and intelligent foreman, who has grown his Auriculas for so many years, had been the day before at Manchester, and there had seen such an array of plants that it quite dazed him, exhibitors coming forward by scores, and hundreds of plants staged; and yet in all the south there are but four of us who can come forward, and one of these, Mr. Douglas, who has now taken a foremost place, had never been a grower had it not been for the encouragement given to the flower by our Society. However, let us take courage. We may by persistence induce others to grow them, especially if we can disabuse their minds of their being a difficulty in growing them.

The present season has been a disappointing one to some of us here in the south. My plants were not in bloom: probably I might have had them in by giving them greenhouse treatment, but the date was late, and I thought surely they would have been in. But of all my Richard Headlys I had but one in flower, no George Lightbodys, Smiling Beauty, Glorys, Lancashire Heroes, so that I could show but indifferently. Mr. Turner and Mr. James complained of the same, and Mr. Douglas had his forward by putting them into his greenhouse. His plants were wonderful for their vigour and size of truss, but in my judgment they lacked a good deal of that refinement which is one of the charms of the Auricula, and a thorough Auricula fancier would have said in most of them that there was too much body colour. Owing to the lateness of the season there was not the chance of seeing so many varieties as might otherwise have been the case, but the following were noticeable:—Alderman Wisbey in Mr. Turner's collection was a very fine green edge, as was also Admiral Napier in Mr. Douglas's, of which he had a plant in splendid condition. Amongst grey edges Col. Champneys, which was in each collection, was remarkable for the brilliancy of its colour and also for its remarkably fine habit. Alderman Charles Brown was very good, while a plant of Chapman's Maria in Mr. Douglas's group was remarkable for the grandeur of its truss and the unique brilliancy of its ground colour; and "though I says it as oughtn't to," the plant of Richard Headly with which I took first in class-showing was generally acknowledged to be a "real beauty." In white edges there was nothing very noticeable. Neither Taylor's Glory nor Hesp's Smiling Beauty, perhaps the two best white edges we have, were shown. Smith's Ne Plus Ultra was good. In selfs Lightbody's Lord Clyde, Campbell's Pizarro, and Martin's Mrs. Sturrock were well shown. Charles J. Perry is a very beautiful blue flower, but it is rather thin in substance but good in habit. Master Hole was also a very neat and well-formed flower. I hope that some other growers will come forward and restore the Auricula to the place it used to hold in and about the metropolis.

The prizes were awarded as follows:—Twelve Auriculas (open), first, Mr. Charles Turner; second, Mr. J. Douglas; third, Mr. J. James; extra, Rev. H. H. Dombrain. Six Auriculas (amateurs), first, Mr. J. Douglas; second, Mr. James; third, Rev. H. H. Dombrain. One green edge (open), first, Mr. Turner; second, Mr. Douglas. One grey edge (open), first, Rev. H. H. Dombrain; second, Mr. James; third, Mr. Douglas. One white edge (open), first, Mr. James; second, Mr. Turner; third, Mr. Douglas. One self (open), first, Mr. Turner; second, Mr. Douglas; third, Mr. James. Twelve Alpines (open), first, Mr. Turner; second, Mr. James; third, Mr. Douglas.—D., *Deal.*

NOVELTIES IN THE ROYAL GARDENS, KEW.

Dendrobium linguæforme is a curious and interesting species; and it matters little whether it is considered as an object of curiosity on account of its leaves or of beauty on account of the flowers, since in either case it is worth cultivation in the choicest collection. The flowers are pure white, with narrow sepals and petals. It was first found by Sir Joseph Banks in the Pacific Islands during the celebrated voyage of Captain Cook; subsequently it was collected at Port Jackson, and more recently has been sent to this country from Moreton Bay. It requires a cool house, and does best on a block.

Of no less beauty, but of different type, we may mention Angræcum, or, as it is sometimes called, Limodorum falcatum. It forms a small tuft of narrow and rigid dark green leaves intermingled with about a dozen pure white flowers, in general appearance the exact diminutives of A. sesquipedale. It does well on a block, and seems to be of free-flowering habit. It is a native of China and Japan.

Oncidium sarcodes is very showy with large finely marked flowers. It is somewhat rare, and is often done duty for by O. pubes. They are quite distinct in flower, and the latter is much the inferior. Among others in passing we may remark Odontoglossum gloriosum, O. luteo-purpureum, Cypripedium niveum, Oncidium bifolium, Dendrobium Farmeri, and Trichopilia suavis.

In the Cape house a very rare and remarkable plant is in flower. From the leaves at a first glance it would seem to be a Cyclamen, but underneath are flowers that indicate a totally different affinity. This is Heterotropa asaroides, belonging to the Aristolochia family, and closely allied to Asarum, with

which it should, perhaps, be united. The perianth is globose, about as large as a walnut and contracted to a wrinkled mouth, with a limb of three triangular segments. The colour is blackish purple. It is figured in the "Botanical Magazine" of 1840, and is a native of Japan. A flower appeared on this plant a short time ago, having one of the perianth segments developed in the form of a leaf-blade, assuming the leaf form, colour, and venation. It should have a shady corner in the greenhouse, and when at rest must not be kept quite dry.

NEW BOOK.

The Fruit Manual: containing the Descriptions, Synonymes, and Classification of the Fruits and Fruit Trees of Great Britain; with a hundred and one engravings of the best varieties. By Robert Hogg, L.L.D., F.L.S., Pomological Director of the Royal Horticultural Society, &c. London: *Journal of Horticulture* Office.

This volume, now in its fourth edition, is very much enlarged both in the size and number of its pages—they amount to six hundred. They contain the fullest and most accurate information for identifying and estimating our fruits. I shall give one extract that readers may judge of it themselves; but it would be false delicacy if I did not add that it is worthy of the author, who, the Burgomaster of Ghent, when he proposed his health at the public dinner of the great Antwerp Horticultural Show, entitled "the Linnæus of pomology."—G.

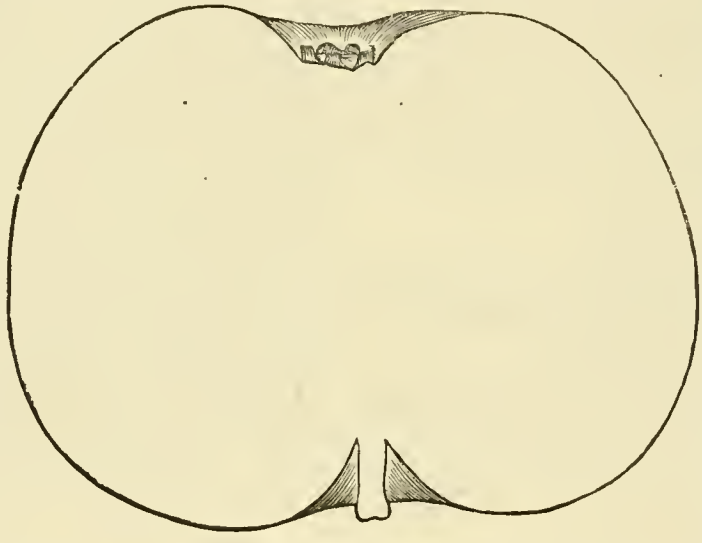


Fig. 83.—Blenheim Pippin.

"Blenheim Pippin (*BlenheimOrange; Woodstock Pippin; Northwick Pippin; Kempster's Pippin*).—Fruit, large, being generally 3 inches wide, and 2½ high; globular, and somewhat flattened, broader at the base than the apex, regularly and handsomely shaped. Skin, yellow, with a tinge of dull red next the sun, and streaked with deeper red. Eye, large and open, with short stunted segments, placed in a round and rather deep basin. Stalk, short and stout, rather deeply inserted and scarcely extending beyond the base. Flesh, yellow, crisp, juicy, sweet, and pleasantly acid.

"A very valuable and highly esteemed Apple, either for the dessert or culinary purposes, but, strictly speaking, more suitable for the latter. It is in use from November to February.

"The common complaint against the Blenheim Pippin is that the tree is a bad bearer. This is undoubtedly the case when it is young, being of a strong and vigorous habit of growth, and forming a large and very beautiful standard; but when it becomes a little aged it bears regular and abundant crops. It may be made to produce much earlier if grafted on the Paradise stock, and grown either as an open dwarf or an espalier.

"This valuable Apple was first discovered in Woodstock in Oxfordshire, and received its name from Blenheim, the seat of the Duke of Marlborough, which is in the immediate neighbourhood. It is not noticed in any of the nursery catalogues of the last century, nor was it cultivated in the London nurseries till about the year 1818.

"The following interesting account of this favourite variety appeared some years ago in the *Gardeners' Chronicle*:—'In a somewhat dilapidated corner of the decaying borough of ancient Woodstock, within 10 yards of the wall of Blenheim Park, stands all that remains of the original stump of that beautiful and justly celebrated Apple, the Blenheim Orange. It is now entirely dead, and rapidly falling to decay, being a mere shell about 10 feet high, loose in the ground, and having a large hole in the centre; till within the last three years it occasionally sent up long, thin, wiry twigs, but this last sign of vitality has ceased, and what remains will soon be the portion of the woodlouse and the worm. Old Grimmett the basket-maker, against the corner of whose garden wall the venerable relict is supported, has sat looking on it from his workshop window, and while he wove the pliant osier has meditated, for more than fifty successive summers, on the mutability of all sublunary substances, on juice, and core, and vegetable, as well as animal, and flesh, and blood. He can remember the time when, fifty years ago, he was a boy, and the tree a fine full-bearing stem, full of bud, and blossom, and fruit, and thousands thronged from all parts to gaze on its ruddy, ripening, orange burden; then gardeners came in the spring-tide to select the much-coveted scions, and to hear the tale of his horticultural child and sapling from the lips of the son of the white-haired Kempster. But nearly a century has elapsed since Kempster fell, like a ripened fruit, and was gathered to his fathers. He lived in a narrow cottage garden in Old Woodstock, a plain, practical labouring man; and in the midst of his bees and flowers around him, and in his 'glorious pride,' in the midst of his little garden he realised Virgil's dream of the old Corycian: 'Et regum equabat opes animis.'

"'The provincial name for this Apple is still 'Kempster's Pippin,' a lasting monumental tribute and inscription to him who first planted the kernel from whence it sprang.'"

VEITCH'S AUTUMN GIANT CAULIFLOWER.

Permit me to speak a word in favour of this well-known vegetable, not, however, because it is a large variety, for as a rule I consider large vegetables are not the most meritorious; neither for any superior flavour do I recommend it, for on this point I conceive it is no better than, if as good as the Walcheren. Its great advantage is its power of resisting the ill effects of drought. Being in a dry district it has been a hard fight to carry Cauliflowers through the summer for a full autumn supply, but with this variety I feel sure of a crop. Last summer when we were without rain for months, and the plantations of Cauliflowers were like dead sticks, this variety alone sustained the trial, and gave in the autumn a supply of great value, and which was in use throughout October and November, at least until destroyed by the severe frost. For prolonged autumn use the seed of the Autumn Giant should be sown at the present time, as it is much longer in attaining its growth than any other kind. By planting 18 inches apart in not over-rich soil small heads are produced which for table purposes are more serviceable than the "Giants." Unlike other varieties it does not button prematurely in a poor soil, and the ordinary autumn rains afford a sufficient stimulant to produce crisp sweet Cauliflowers 3 to 4 inches in diameter. A dish of three or four of these is at all times more satisfactory on a gentleman's table than is one head so large that it must be smashed or mutilated to squeeze it beneath the dish-cover. Sown now for autumn use it is a vegetable of great value, and should be grown in every district where drought is usually prevalent, as it will yield heads when all other varieties are burnt up.—A Kitchen Gardener.

ROSE GROWING.

In some perhaps trifling matters Mr. Taylor and myself do not quite agree, but the many practical articles that adorn the pages of the *Journal of Horticulture* from Mr. Taylor's fertile pen, one and all must read with a great relish. That (see page 307) on Rose growing, if it wanted any testimony, I could give it with perfect good faith. I have Roses now in bloom of large size and healthy, struck in the manner that Mr. Taylor so ably describes; they have been potted six years, and have a top-dressing yearly. The plants in my cutting bed are now making their young growths. I may mention that Tea Roses are not so hardy as Hybrid Perpetuals, and they require the assistance of a handlight in sharp seasons. I beg

to congratulate Mr. Taylor on the success he has achieved by sheer hard work, and hope he will live to charm us with more of his admirable notes.—R. Gilbert.

AURICULAS AT THE ROYAL NURSERIES, SLOUGH.

Mr. Charles Turner's collection of these choice old florist flowers is now in full beauty, and the pleasure of inspecting them will well repay the ardent amateur for any of the discomforts incident to a long journey. It is also a treat to have an hour's chat with that genial florist Mr. John Ball, Mr. Turner's foreman of the florist flower department; his heart is so thoroughly in his work, and his knowledge of the subject so extensive, that the most experienced cannot fail to learn something from him. There is but little new to chronicle amongst the stage varieties. Alderman Wisbey Mr. Ball believes to be the best green edge; the pips are quite circular, the tube bright yellow, paste dense and white, body colour dark; it has, however, the fault of the green edge not being quite pure, and the habit of the plant is not perfection. Hertfordshire Hero is another very good green edge not much known as yet; it was not quite out, but I noted it in Mr. Turner's collection a few years since as being one of the best; the green of the edge is purer than that of the preceding.

Amongst the *grey-edged* flowers there is nothing new that has not been already described in these columns. All the best sorts were in fine condition. Colonel Champneys stood up grandly amongst the others. It may have some defects in the critical eye of "D., *Deal*," or Mr. Horner, but as it was to be seen at Slough it is unsurpassed. The ground colour is a beautiful violet, and the pips are faultless in shape; added to this it has a large truss, and is the most easily grown of any Auricula; from a decorative point of view it is A1. Other very fine flowers were Competitor, Alderman Charles Brown, George Lightbody, Richard Headly, Unique (Dickson), and Unique (McLean).

White-edged.—Mr. Turner's collection is at present very strong in this class. Arabella (Headly) was remarkably fine; as I had seen it previously, and as it has flowered at Loxford this season, it is very similar to Popplewell's Conqueror, and like that flower somewhat goggle-eyed; one truss of it at Slough was perfection, the eye nearly filled by the anthers, and the body colour showed-up well between the dense white paste and the correct white edge. John Waterston came next to it: this flower has a very perfect truss, and as it is grown here it must certainly take its place as a white edge. Smiling Beauty was not quite out, but two trusses that would open in a week were very strong. Omega is a new flower raised here, but the trusses were rather small; with stronger plants this variety must be placed high on the list. Taylor's Incomparable, and Favourite (Gairns), Model, and Highland Queen, were very fine.

Amongst *selfs* Charles J. Perry holds the same position as Colonel Champneys does amongst the greys; it is a very beautiful violet self of very free growth. Cantab (Headly) is a fine dark self. Perfection, *alias* Mrs. Smith, is very dark with a clear white paste; many of the best selfs are in full beauty.

Alpines are now a strong section, and as the pure white paste is one of the essentials in a good stage flower, so a clear yellow paste is a characteristic of a good Alpine. The best varieties with the yellow or gold paste are Colonel Scott, very dark maroon, one of the best, and sent out this year for the first time. Diamond, another new and fine flower. Mercury, a splendid maroon crimson, flower perfect in every respect. King of Crimsons, this is another beauty, with an immense truss and pips of fine quality. Brilliant, though this is one of the earliest of Mr. Turner's seedlings, it is a fine crimson flower with fine paste. Spangle, dark crimson, with gold paste. Bronze Queen, fine bronzy crimson, very circular flower; plant of neat habit, bright yellow paste. Topaz, very large pips, yellow paste, surrounded with a broad edge of purplish crimson; a grand flower.

Certain flowers in the alpine class are distinguished by what is termed a custard paste. The lighter-coloured flowers have generally this paste; some of them are very good, and in many of them the pips are larger; they are not so attractive as those with the yellow paste. One of the best flowers of this type is a new one named Beatrice; it has large circular pips. Conspicua and Elcho, fine flowers with an immense truss. There were many other fine flowers in the alpine class, but the above are the cream of them. One very distinct and pretty flower of this class which I had from the north, named Miss Reid, I did not see here. I noticed that the plants were not placed on stages as is usual, but on a layer of coal ashes. This system must be well adapted for hot dry districts, as the moisture arising from the damp ashes is certainly conducive to the health of the plants.

There are other objects of interest at the Royal Nurseries. Long ranges of houses filled with pot Roses on the Manetti stock, other ranges with stage and fancy Pelargoniums. The houses devoted to specimen pot Roses are filled with exceedingly healthy plants; the smaller specimens are forced for the earlier shows, and would be ready in a few days. Céline Forestier seems to be one of the most constant yellow Roses; Paul Neron was very fine, and conspicuous amongst a host of beauties Marquise de Castellane stands out proudly; and while the Duke of Edinburgh is one of the best dark flowers, the Duchess holds a proud pre-eminence amongst the lights. Capitaine Christy is also a fine light flower.

The large specimen Azaleas which I saw on the occasion of my last visit have been disposed of, and smaller, though quite as interesting, specimens have taken their place. There are some excellent standards in full flower, which will doubtless be seen at some of the exhibitions. They are trained umbrella fashion, and are exceedingly effective.

Amongst the newer sorts, which ought to be in the most select collections, are Madame Louise de Kerchove, bright salmon, edged with white. Comtesse de Beaufort, large bright rose flowers of great substance, densely marked on the upper petals with crimson spots. Apollo, white, very sparingly striped with red; a fine large flower. Charmer, rosy purple, very large flowers. Mdlle. Leonie Van Houtte, white, the upper petals marked with greenish spots. Mdlle. Adelina Patti, white, with red stripes. Princess Louise, salmon, edged white.

The spring bedding is at its best, and altogether the Royal Nurseries are well worth a visit.—J. Douglas.

THE CULTIVATION OF HALF-HARDY ANNUALS.

By these are meant that class of annuals which are grown in the open air during the summer season for flowering in the autumn. They are a class of flowers distinct from the hardy annuals, both by their more massive and imposing flowers, and by their longer continuance in bloom. In this respect they may almost be regarded as bedding plants, as when once the beds are filled, the flowers will continue until destroyed by frost. They are adapted for autumn decoration especially, and in this respect are not open to the reproach of hardy annuals in being weedy in their habits and transient in their beauty. Yet they are not suggested in any way as rivals to the bedding plants proper, but they are recommended as substitutes where substitutes are needed, and also as auxiliaries to the more varied and complete floral adornment of the surroundings of our homes.

No fault is found with those whose ideal of decorative taste is represented in the stereotyped patterns wrought by pigmy plants into designs borrowed from Brussels carpets or Indian shawls. Many of these designs are exceedingly chaste, and are marvels of taste, patience, and skill, in the highest degree creditable to adepts in this art—for art it is—of garden embellishment. But the mode is not adapted to all—not, indeed, to a tithe of English gardens, and if it were it is not at all certain that their interest would be greater or their beauty more really enjoyable and satisfying by the overwhelming sense of artificialism which would pervade them.

It can hardly be denied that a characteristic of the times is to foster a taste for mere copying and imitation amongst gardeners, and which is occasionally carried out, or attempted to be, in places and under circumstances which invite at the best but a partial success, and often a certain failure. Better by far would it be to first accurately measure the resources of a garden, and on these resources base a line of action, than to attempt to imitate every latest fashion of the hour, and seek to import it where it is unsuitable. Under this great governing principle of mere imitation a monotonous sameness is enveloping our gardens, and which results, in innumerable instances, in half-finished attempts at aims to be grand, and a conviction throughout the season that the reward, at the best, is an imperfect work. It can never be really satisfying to

owner or gardener to feel that the best they have to offer is a poor copy of the same idea which is perfected in half a dozen gardens which the visitor has seen in as many days' travel. Far more enjoyable is the feeling which arises from the fact that a system has been followed, and which circumstances have permitted to be carried out fully and well.

Such a garden does not tell one on the face of it that we have aimed at something beyond our power and have failed, but it at once impresses a feeling that correct judgment and good taste have been exercised, and that the fare which is offered is the best of its kind. A garden of such a nature is sure to be enjoyed, let the style of its decoration be of what pattern it may. A garden of hardy flowers, interspersed with plants of sweet odour, and brightened by half-hardy annuals, is, providing all are grown well, certain to command admiration, and is altogether more creditable to the owner and more decidedly enjoyed by his visitors than is an elaborate endeavour to ape a style which has ended in a grand example of patches, and a patent conglomeration of futile attempts.

It is unquestionable that what is known as stylishness has, of late, driven the beautiful and sweet plants of tender annuals out of many gardens. These plants are nevertheless still worthy of the room they occupy, and will add a feature of interest and a measure of enjoyment wherever they are cultivated. They are also a class of plants easy to fall back upon to that large body of persons who lack a full supply of other bedding plants with which to fill their beds and borders. They are, in fact, the best of all substitutes for what we call bedding plants, and are easily raised in any required quantity. But is it not late to recommend the raising of them now? The reason why that is a natural question is, that now-a-days it is so much the custom to raise plants in pots and grow them on under glass for planting-out, that a plant is hardly considered to be worthy of the flower garden unless it has undergone the regular period of nursing.

The plants in my boyhood days had no such tender treatment given them. They had not then to undergo a term of coddling probation, and yet we had such beds of Stocks, Asters, Zinnias, Dianthuses, Marigolds, Amaranthuses, &c., as are seldom met with now. The fact is that seed sown during the first week of May will produce splendid sturdy plants, which by steady unchecked growth will fully equal, if not surpass, those which had been raised two months earlier and had been nursed on tenderly under glass. I quite agree with Mr. Allis (p. 334), that if a glorious row of Ten-week Stocks is coveted, few, if any, modes can surpass that of sowing the seed thinly in a drill, and there letting the plants remain to bloom. Thus sowed at the time stated in rich deep soil, and the single flowers drawn-out as soon as seen, will leave a massive row of double Stocks that cannot be surpassed by sowing under glass and subsequently transplanting the seedlings. All the tender annuals may be sown with confidence in a natural manner at this season of the year, with the certainty that they will give a splendid return in the autumn of healthy plants and enjoyable flowers.

It is easy to make up for what may be thought late sowing by rich soil and generous culture. The seed bed especially requires to be good. A sheltered site in the open air fully 6 inches deep of rich light soil will raise such plants as those above-named as it is impossible to equal by sowing in pans under glass in March. Everything depends on the seed bed. It should therefore be composed of prepared soil either with or without a gently heating base of manure. Such soil should be composed of quite half of old mouldy manure or leaf mould, and the rest sandy loam. Sow in a bed of that kind Asters, for instance, early in May, and by no other means known can finer Asters be produced in the late summer and autumn months.

The Aster is an autumn flower *par excellence*, and injustice is done it by sowing early and compelling it to bloom prematurely in the sultry days of summer. Asters, like Celery, must have heavy autumn dews to bring them to perfection. In every garden in the land ought Asters to be sown at the time and in the way stated, and then, other points of culture being correct, splendid blooms will follow as a matter of course—such as will raise the flower in the repute it is worthy to enjoy. Asters as autumn flowers are sadly neglected. All the varieties are good, and some are really splendid both as to colour and perfect symmetry of bloom, but they are spoiled by the fashion of sowing them too early, and subjecting them to the tender mercies of checks by drought, and crowding, and insect feastings.

By this natural mode of raising the plants we have had no lack of splendid Asters, glowing Marigolds, brilliant Zinnias, and pendent blooms 3 feet long of Amaranthus caudatus for harvest festivals when a first-fashion garden could contribute nothing for that joyous time. These are the flowers to grow for cutting when flowers in autumn are so often required in quantity. Let them have a place; carpet, and cushion, and enamel, and panel, if need be. Not a word is said against it, but only against the slight that is being given to cheerful-flowering plants of the garden by all-devouring "style" and picture-growing "effect."

Helichrysums and other Everlasting Flowers are all amenable to this easy natural mode of culture, and by it autumn flowers may be had in prodigal profusion. Permit them at least to have a share of attention, and let us do away for ever with the complaint of a noble lady who had fifty thousand plants "put out" in her garden, and who had no flowers to cut to enliven a festal scene.—A Surrey Gardener.

PEACH FORCING.—No. 4.

Resting Period.—No amount of frost so far as I know will injure the well-ripened wood and buds of Peach trees. The lights, therefore, I advise to be removed, from the house being put in order to forcing commencing; but some object to this, as the house is wanted for other things. "Other things" very often mean plants which cannot endure cold, which is what Peaches require for perfect rest, they not being subjects of the tropics where dryness corresponds to the cold of the temperate zone, and the warmth thus given also means dryness, whereas the Peach at rest requires cold and a moist soil, and even should the latter be given the warmth causes them to start prematurely, the buds to swell, and blossoms to expand irregularly and weakly. I know many, and I may say most gardeners are obliged to have plants in fruit houses which they know be inimical to the successful culture of the fruit trees, and to keep the trees cold or remove the lights would be to deprive their employers of a number of plants or their flowers; hence the laudable endeavour to please is often only a cause of disaster to the Peach crop, which is put on the back of the cultivator, and not in anywise attributable to the wish on his part to meet his employer's behests, contrary as they may be to success in the object to which the structure is devoted.

Peaches are grown in houses that are cold, so far as it relates to frost being only excluded, or a minimum of 35°, which is all very well if it could be done without fear of the 35° being not oftener 40° or more, a temperature more frequent when 35° is aimed at, for who can tell to a few degrees what heat will be required to keep a house at so low a minimum on a cold morning without allowing a margin for emergencies? I could never act up to such niceties; better say keep as cold as possible and exclude frost. Better far admit it for two reasons—the rest is more complete, and the trees do not require so high a temperature to excite them when forcing is begun; and a third is the enhanced healthfulness of trees rested cold, as compared with those rested in a temperature sufficient to excite into growth those which have been kept cold.

Further remarks must be made as to the period of rest. In no case ought the period from the fall of the leaves to forcing commencing be less than six weeks; if twelve weeks elapse all the better. For early forcing the latter time can hardly be allowed, for the earliest forced trees will not lose their leaves until the early part of September (and to remove them before they part readily from the tree by a light brushing in an inverse way to growth is not sound practice), so that with forcing commenced early in December the trees can hardly have more than ten weeks' rest, as the house will be closed ten days to a fortnight before fire heat is applied, and from closing the house dates the forcing, for if no fire heat be applied natural heat is retained, or cold warded off by artificial means. Trees which have been regularly early forced will have the wood ripe at an earlier time than is named, and if the soil is kept moist they have a tendency to secondary growth, and will even blossom to some extent and set the fruit. Dryness even in a case of this kind I do not advise, and yet it must be resorted to, but not to the extent of what is known as dryness compared with Vines, for the soil for Peaches should never be so dry as to cause the leaves to become limp. Care, therefore, will need to be taken so as to have due moisture in the soil without being sufficient to promote growth. We must also keep the house as cool as possible, and the foliage healthful.

Then we have to guard against premature swelling of the buds, as in a warm and moist autumn trees which have fruited early and been at rest some time are liable to be excited even when exposed. The best thing for retarding the growth is to cover the house, in place of the lights, with straw shutters—lath frames covered with straw, closing the house during the day, but having top and front ventilation at night. This will keep the trees cool and ward off the sun, which dormant Peach trees cannot long endure without the buds swelling. The straw shutters may be removed in dull weather, or remain on until replaced by the lights. It ought also to be borne in mind that the water in the pipes for heating will, if frost long continue and be severe enough, freeze, and may crack the pipes. Either they must be empty at such a time, or the valves raised a little, so as to warm the water and prevent freezing. I will conclude the introductory observations by stating the border outside is to be covered with 6 inches of fresh rather short stable litter and leaves; the inside border thoroughly watered when the lights are put on, and the house closed.

Period of Forcing.—The time from closing the house to the fruit being ripe somewhat varies as bright or dull weather prevails. The period usually extends over five months, or less if the season be propitious. A house closed at the middle of November will have the fruit ripe at the close of April or by the 1st of May with the old kinds; but with the Early Beatrice and Early Louise Peaches, the end of March or early in April. Those kinds under the same conditions as Royal George and others being rather more than a month earlier than the old kinds. The house closed the middle of December the fruit is ripe at the end of May or early in June; at the middle of January the crop is ripe at the end of June or early in July; middle of February will give ripe fruit towards the close of July and early in August, and these will be followed by those on walls or in houses having no artificial heat, only to secure the safety of the blossom and young fruit from frost, and it may be the ripening of the crop and wood in an unfavourable summer.

Temperature.—After the lights are put on and the house closed, no artificial heat is to be applied the first fortnight, so that forcing proper will commence on the 1st of the month ensuing that of the closing of the house; but the temperature ought not to be allowed to fall below 35° at night, nor must it exceed 40° by artificial means. After or during January trees previously forced will have the buds in a forward state; they nevertheless are to be kept cool the first fortnight, admitting no air until, by sun heat, 65° is registered; but if so far advanced as to be in flower, they must have the temperature as hereafter specified. After the first fortnight the minimum night temperature 35°, maximum 40°; day minimum 45°, maximum 50° by fire heat; sun heat 65°. The application of the fire heat should be gradual, those temperatures not being attained until the close of a week after applying it, still gradually increasing, so as to have the temperature at the end of another week, when the blossoms will have in part expanded. Fire: day 55° maximum, 50° minimum; night 45° maximum, 40° minimum; and sun 65°. These to be continued until the fruit is set and begins to swell, when the day temperature from fire heat is to be kept steady at 55°, night 50°, morning 45°. A short time only will elapse ere it will be seen what fruit is going to remain on until the stoning process—some will swell quickly to the size of horse beans, whilst others will remain the size of peas, and grow no larger, but drop. The temperature at this stage may be—fire: day maximum 60°, minimum 55°; night maximum 55°, minimum 50°; sun 65°, to begin admitting air, advancing to 75° or 80°, not exceeding the latter without full ventilation, nor 75° without full top or back air. We continue at the latter temperature until we see which fruit is going to stone, and as some may cease swelling and drop, know those remaining are undergoing that process, and will remain, so far as swelling is concerned, almost stationary.

So soon as this is completed, which may be known by trying a fruit with a knife, after a fortnight or three weeks of the standstill state of the fruit, or when the fruit again commences to swell, it may be taken for certain the stoning is completed, and the temperature be gradually raised by fire heat—day 65°–60°, night 60°–55°, sun 75° to 80° or 90°; and by the close of another week fire heat by day 75°–70°, night 65°–60°, sun 75°–85°–90°, and continue until the fruit is ripe.

After all the fruit is ripe the trees must not be exposed too suddenly to a lower temperature, but it may be gradually lowered as regards the night temperature, securing to them a minimum of 55° by artificial means, until it is afforded by natural heat.—G. Abbey.

THE SPRING BULBS IN HYDE PARK.

Though it is not in my power to write a very glowing description, a few plain notes may probably be of some little interest. Mr. Luckhurst's notes show that bulbs in Sussex are much earlier than here. Hyacinths can scarcely be said to have arrived to their full beauty, while of Tulips but few kinds are in flower.

As in the case of summer bedding, the principal masses of colour in Hyde Park are in the beds running parallel with Park Lane, between Stanhope Gate and Grosvenor Gate. The beds are on turf in a double line. The whole of the double line of beds are planted alternately with blue, white, pink, or red Hyacinths, varying, of course, in shades of colour; each bed or each pair of beds being devoted entirely to one colour. All are edged with Crocuses, now out of flower. On the whole, these beds have a very pretty and pleasing effect, especially at a short distance, as on closer inspection one discerns a few faults in the way of gaps and unevenness in growth.

The Tulips, which occupy the single line of beds, are altogether wanting—at least at present, being backward, and are much disfigured and crippled in foliage, the effects doubtless of the long and severe cold. There are here only three varieties well in flower—namely, Vermillion Brilliant (which is dwarf and good in point of colour), Keyzers-Kroon, and White Pottebakker. Some little allowance of course must be made for the times of flowering, as spaces will always intervene between them more or less according to the selection.

Adjoining the Albert Gate, where the Palms and semi-tropical plants are usually placed, are some few beds of mixed Tulips, very good, being well flowered, with fine, strong, healthy foliage; attributable, no doubt, to the somewhat more sheltered position.

I shall not name the several kinds of Tulips which are not in flower, but will give you the names of all the best Hyacinths. These are—Bouquet Tendre; Regulus, extra good; Diabitz Sabalskansky, good colour, uneven in growth; Baron Van Tuyll, fine spike; Grand Vainqueur, very good; Robert Steiger, very good; William I., very dark and good; Eclipse; L'Ami du Cœur, fine violet blue; Crown Princess; Charles Dickens, immensely large spike; Mimosa, deep blue or black; Amy, pretty, but rather small; Grandeur à Merveille, extra good; Uncle Tom, very dark; Queen Victoria, one of the best, and I think may be fairly called the best of this batch; La Candeur, dwarf and good; Bleu Mourant, good; Anna Maria, double, almost if not the only double, and well that it is so, as it will bear no comparison with single varieties of its colour.—C. Martell.

PROTECTING POTATOES.

Now that morning frosts are prevalent, and many tender plants are in danger of being cut off, I would mention a simple plan whereby I have more than once saved my early crop of Potatoes. This is a crop of great value, and worthy of a little extra trouble to secure it at the earliest possible date, and also in profitable quantity. Frost not only throws the crop backward, but lessens the bulk considerably. When first appearing above ground the simplest plan, perhaps, is to draw the soil over the leaves. Eventually they grow so high as to render this impossible, and still they are endangered by late frosts. The first crops are generally planted in short rows across south borders, and are then easily protected by boards. A lath stuck in the centre of the rows, one at each end, and two boards set on edge, one on each side of the row and leaning against the lath, forms a wooden roof under which the Potatoes are safe from 10° of frost. It is a very simple old-fashioned plan, but on that account is none the worse. Any sort of old boards, 9 inches or more in width, will answer; but, it may be added, the use does no harm to new boards, as they are only required for a week or two. In the morning they are just thrown one each way, and lay flat between the rows, or they may be ridged on edge, which takes up a little more time. The advantages are—the Potatoes are quickly covered and uncovered, and are quite safe from any ordinary frost. I have proved the plan effectual, and hence I recommend it.—Amateur.

THE BLACK POPLAR AND THE ASPEN.

You ("A. F."—a correspondent) have been correctly advised to plant these as quick-growing trees, with light-coloured foliage that will be effective in front of the dark-leaved Conifers in

your plantation. It is quite true that these two Poplars usually grow largest in moist soils, but they are cosmopolitan; they will thrive in almost any climate and any soil. We have seen both of them growing as large and as handsomely formed on a dry calcareous soil as the Black Poplar represented in the accompanying engraving. You may easily discern without any danger of being deceived which is an Aspen, not only by its leaves, but more certainly still by its inflorescence, of which we now publish an engraving. The leaves of the Aspen are roundish ovate, the edge slightly wavy and toothed, downy

Fig. 84.—Black poplar.

when young, but quite smooth when full grown. The leaves of the Black Poplar are deltoid-pointed, toothed, with glands at the base of the teeth, and always smooth on both surfaces. We add a few notes relative to each species.

Populus tremula, the Trembling-leaved Poplar or Aspen, is a native of most parts of the British Islands, and is described by all our earliest herbalists, but by none in such scandalous terms as by old Gerarde, all of whose female relatives must have been scolds, he says it "may be called Tremble, considering it is the matter whereof women's tongues were made, which seldom cease wagging." The continuous tremulous motion of the leaves arises from the even balancing of their discs, and the length and slenderness of their footstalks. Its popular name is derived from the Anglo-Saxon, and refers to that motion. Æpse was its Anglo-Saxon name, and the same word is in that language synonymous with our "tremulous."

Superstition has given birth to a legend, at one time prevalent in the Highlands of Scotland, and thus told by Mrs. Hemans. The Cross—

> "Was form'd of aspen wood: and since that hour
> Through all its race the pale tree hath sent down
> A thrilling consciousness, a secret awe,
> Making them tremulous, when not a breeze
> Disturbs the airy thistle-down, or shakes
> The light lines of the shining gossamer."

In dry soils it does not attain a greater height than 50 feet, but in moist situations it is often full 80 feet high. It is not a long-lived tree, usually beginning to decay when seventy years old, and this, with its tendency to produce numerous suckers, renders it not desirable for ornamental planting near a lawn or flower borders. The wood is white, soft, and light, and is used by the turner for forming bowls, trays, and other utensils. It was so valued for making arrows that in the reign of Edward IV., 1464, a statute was enacted from which the following is extracted:

"Patten makers may make pattens of such Asp as is not fit for shafts.

"Asp timber is the best and lightest timber, thereof to make pattens and clogs, most easy for the wearing of all estates, gentiles, and other people, of any timber that groweth.

"Turners, carpenters, woodmongers, and cole-makers do occupy, expend, and waste yearly in their occupations a great quantity of all manner timber of Asp."

Populus nigra, the Black Poplar, probably so called because of its darker tints than those of the White Poplar. Its bark is browner, and the leaves have no white down on their under surface. It attains a height of 80 feet, and its wood is one of the best for making turnery ware. It has been much used for flooring, and Mr. Young tells that it is so slow in taking fire that the flames were stayed at that part of a building on fire constructed of this wood. It affords pasturage for bees, both by its catkins and the honeydew which is freely secreted on its leaves.

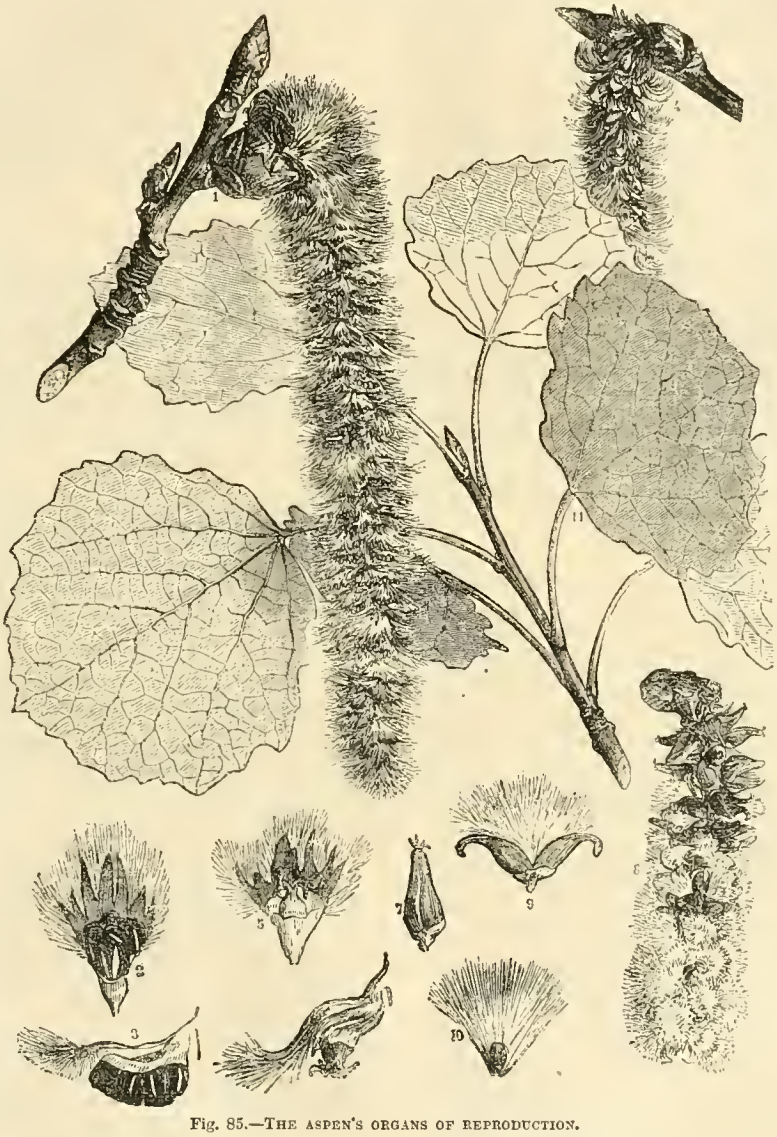


Fig. 85.—The aspen's organs of reproduction.

1. Shoot with leaf buds and male catkin.
2 and 3. Stamens on bractiform disc.
4. Female catkin.
5 and 6. Female flower, base and side view.
7. Fruit perfected.
8. Piece of a fruitful catkin.
9. Fruit burst open.
10. Seed with its feathery awn.
11. Point of a leaf shoot.

NOTES AND GLEANINGS.

The following information for intending English exhibitors at the forthcoming International Horticultural Exhibition at Cologne, to be opened on the 25th of August next, has been sent to us for publication. The Netherlands Steam Navigation Company and the Belgian Company, whose steamers ply respectively between London, Rotterdam, Dover, and Ostend, as well as the Rhenish Railway Company, have reduced the freight on goods to be sent to the Exhibition by 50 per cent., and no duty will be charged on such objects unless they should be sold in the country.

—— On April 7th a deputation of the subscribers to a testimonial to Mr. Lees, late of Tynningham Gardens, met with him in Edinburgh, and presented him with a handsome gold watch and chain and a silver tea-service, as a manifestation of the high esteem in which he has for many years been held as one of our very foremost cultivators of plants and fruits, and of his exemplary character as a man. Mr. Methven, nurseryman, occupied the chair on the occasion, and the formal presentation was by Mr. Thomson of Tweed Vineyard. We trust Mr. Lees may long be spared to enjoy the articles of presentation as well-deserved tokens of ability and character.—(*The Gardener.*)

—— Two Useful Books have just been published. One of them is "The Narcissus, its History and Culture, with coloured plates, and descriptions of all known species and principal varieties." The author is Mr. F. W. Burbidge, and there is added a scientific review of the genus by Mr. J. G. Baker, of the Royal Herbarium, Kew. The coloured plates are excellent. The other book is "Pruning, Grafting, and Budding Fruit Trees." The author being Mr. D. T. Fish, insures that the details are reliable.

—— The following tells the wages of a head gardener 503 ago. In 1372 John of Gaunt issued a warrant, which is still in existence among the archives of the Duchy of Lancaster. It is addressed to his Receiver-General, and having recited the engagement of one Nicol Gardiner as "nostas gardyner"—the surname and the office being differently spelled—for "nostre manoir de la Sauvoye," it proceeds to define his duties and emoluments. Nicol, we observe, is to have all the fruits and "herbages" for his own profit, saving only what is required for the household, but is to manure and work the garden at his own cost and charges, and to provide all things needful, "busoignable," for its due cultivation. The Duke, on the other hand, stipulates to provide him with rails and fences for the railing season, "en temps de raillement," and for wages commands the Receiver

to pay him the sum of twopence a-day whilst he is retained as gardener; or, in the old Norman French of the period in which the warrant is written, *deux deniers chaseum jour le temps qu'il serra ensi gardyner.*

—— Frosted glass, useful for screens, &c., is made by laying the sheets horizontally and covering them with a strong solution of sulphate of zinc. The salt crystallises on drying.

—— All the Teas, green and black, and every variety however named in the market, are the produce of one shrub, the Thea viridis. The variations of colour and flavour arise solely from the different soils and climates where the Tea is grown, and from the different modes of manufacturing it. The preparation of green Tea may be described in general terms as follows:—The leaves are gathered from the shrub and placed in bamboo baskets; they are then put into shallow iron pans, placed over charcoal fires, and stirred continually and briskly, the rising steam being fanned away; after this they are removed from the pans, and whilst still flaccid with the contained moisture are placed before the twisters on a table made of split bamboo, and therefore presenting ridges; the twisters roll them over with their hands until twisted. The leaves are then spread out and exposed to the action of the air, and afterwards returned to the drying-pans, exposed there to additional heat, and kept continually stirred until the drying is complete, when they are picked, sifted, sorted, and so prepared for packing. Black Tea is prepared in the same manner, with this difference, that the fresh leaves, as soon as collected, are thrown together into heaps, and allowed to lie until a slight degree of fermentation ensues, or a spontaneous heating, similar to that which takes place in a damp haystack. This partial fermentation of the Tea leaves darkens their colour. All the black Teas are grown at Fokien, a hilly and populous district about two hundred miles to the north-east of Canton. The green Teas are raised in the district of Kianguan, about 750 miles from the same city.—(*Cassell's "Technical Educator."*)

OUR BORDER FLOWERS—ANDRYALA LANATA.

For years past we have been seeking for plants for various purposes for spring, summer, and autumn decoration. I have sometimes thought, Why has not the plant bearing the above name been brought into requisition? Is it because it was introduced to the notice of our forefathers as long ago as 1732 that it may be thought too old to have a place in these days of modern gardening? I am not aware that the services of this plant has ever been much in request, at all events we very seldom meet with it. Should any feel disposed to acquaint themselves with it, they will not only find in it an old friend but a very good new one.

It is a very choice plant, said to be hardy, which it may be in some favoured localities; but it is not safe to be too venturesome if you mean to continue acquaintance with the plant. I find it to be about as hardy as Centaurea candidissima. Sometimes it passes through the winter, sometimes not. I like it best from seed sown in the summer in gentle heat, and when large enough to handle the seedlings may be potted into small pots in a light sandy compost, be grown-on in heat for a time, hardened off in the usual way, and be kept in a cold pit from frost. In the following spring they can be planted where required.

The plants may be increased by division and also by cuttings during the summer and early autumn. They require thorough drainage, but should not suffer from want of water. A compost of sandy loam, peat, and leaf mould will suit them. They are impatient of damp. The plants continue for a long time in flower, and are useful where cut flowers are in request. I have not tried the flowers, but I have an impression that with care they might be dried, and be turned to good account when flowers are scarce and in demand. This plant should have a prominent place in all our borders. (This is now called Hieracium verbascifolium.)

SOAPWORTS.

With the exception of two or three species the Saponarias are seldom met with in our herbaceous borders, and are little known in general cultivation. We are in possession of one of this family as a native plant. It is sometimes met with on the banks of rivers in shady places. It is considered by some to be rare, but is more local than rare, as when met with it is pretty abundant. It has the merit of being one of our autumnal-blooming plants, and on that account it is the more desirable. Saponaria officinalis has done duty on the exhibition table during the autumn both as a native and herbaceous plant. S. officinalis plena is sometimes met with in cultivation. Naturally they are not what is termed good-habited plants, but in semi-wild situations in moderately good soil they will for the most part take care of themselves. They are not well adapted for the dressed border on account of their rampant growth.

There is a great contrast between members of the same family, for while Saponaria cæspitosa grows only 3 or 4 inches high, S. officinalis grows as many feet, but the former requires more care than the giant form. It likes a cosy nook on the rockery, and should have good sandy peat and loam with knobs of sandstone mixed with it to grow in. It requires moisture, but must not be drowned. It is well worthy of cultural care. S. luteum is another diminutive kind, and requires the same treatment as the preceding; having yellow flowers makes it more desirable. S. caucasica flore-pleno is a very choice border plant; planted in good loam mixed with leaf mould and sand, when well established it will attain the height of 2 feet. It flowers for a length of time.

S. ocymoides is the best of the family; it is of dwarf prostrate habit, well adapted for overhanging ledges of rockwork, baskets, or edgings. When well established it lasts for some time. It may be increased by seed. In some soils I have known plants die off without any apparent cause. I prefer renewing them yearly by cuttings during the summer. They strike freely in sandy soil under handlights or in cold pits in a shaded position. When rooted they should be potted and plunged in ashes till wanted to plant where they are to flower. This is one of the very best plants for the spring garden that we possess; no plant can surpass it as a bedder or for bordering. It should have a free porous soil and a moderately dry situation, but should not suffer from want of water. There are others that ought to be found in more general cultivation. The smaller species may be increased by division, but this is attended with danger to the plant, which requires very careful manipulation, or there is a fear, after the operation, of the plants going off, and then there is sometimes a difficulty of replacing them.—Veritas.

WATERING PLANTS.

THE WATERING POT, ITS USE AND ABUSE.

This is a subject that at this season of the year claims the attention of gardeners and amateurs. Those who have large supplies of bedding-out plants to prepare know full well what a heavy task the watering is after a sunny day. The few remarks I have to make are on the indiscriminate use of the watering pot, and they apply chiefly to bedding plants. As a rule the watering of such plants is done with a rose watering pot, for the sake of despatching the work as quickly as possible. I dare say that many know well what the after-consequences are likely to be if the practice is carried on for any length of time. Perhaps some may say, "Unless we water in the way described we should not complete the work in anything like reasonable time." No doubt that is a prevailing idea, but it is at times destitute of force. I fully admit that the task of watering is a heavy one and will often tax the energies of those who have such work to perform.

Suppose a young man is set to work on a mixed collection of bedding plants, if he is not provided with two large watering pots and a smaller one he ought to be, unless there happens to be a good supply of water close at hand. As a rule the first performance is the rose pot set to work in right good earnest right and left; whether the plants require it or not, all must submit to the same proportion of water. But the next question is, Do they all receive it? I will, for instance, take a well-established Geraninm with a good bushy head for a test plant. By watering on the heads of such plants it will be found that at least half the water will run off, while Calceolarias, Verbenas, and a host of plants are apt to become water-logged; the soil is soured, the plants begin to turn yellow, and ultimately they sicken and die. I have seen many Calceolarias and Verbenas so ruined, but when this appearance presents itself to the eye the wonderment is, Whatever can be amiss with the plants, for it is not for the want of water? That may be very true, but it is owing to having had too much water. After the watering is finished some will say with pride that they have completed their work in such a short space of time, but not thinking how many plants they have injured, and, it may be, given the fatal draught.

These remarks are not directed to the practical gardener, for he will know at a glance how matters stand, but it is to the tyro that they may be of some service. I may be asked if it is wrong to water heavily with a rose pot, and what plan ought to be adopted. Simply as follows:—Have a small watering pot with not too wide a spout, and single out each plant for watering. Apply the water carefully, not standing upright and pouring it in at random and washing half the soil out of the pots. Try this plan against the flushing system with the rose, and make a note of it as to how much time is occupied by such a plan. Suppose the water has to be carried some distance, this will entail much extra labour, which by judicious watering is avoided, there being less water to carry; and this I think will be found to balance favourably against the extra time it would require in watering, besides being much better for the plants. By this plan only those plants have water that require it. There are times when the rose may be judiciously used if it is thought desirable, but not oftener than once in two or three waterings, unless the weather should be very hot and dry. But many will have to be guided by the supply of water, for in some places it is a very scarce article.

The nature of water to be used is a great item in the well-being of plants. We all know that rain water is the best where we can obtain it, but how often do we see the supplies drawn from the indispensable garden pump, as hard and as cold as it can well be? This of itself is a sufficient cause to make plants look sickly. If spring or well water is the only available supply it should be pumped up into some tub or cistern at least eight or ten hours before it is used, so as the action of the air and the sun may warm it; but so many work on the penny-wise and pound-foolish plan that such necessaries are often lost sight of.—G. R. Allis.

NOTES on VILLA and SUBURBAN GARDENING.

The Amateurs' Greenhouse, Vinery, and Frames.—At no period of the year are the above structures found so serviceable as at the present time, and speaking generally, I think that at no season is it more difficult to manage the plants grown in them, because it is yet too early to trust safely the bulk of bedding plants out in even sheltered spots without ample protection. The keen frosts we have lately had, especially on the morning of the 25th, warns us against the too early transition of tender flower-garden plants from the protection of the houses. Consequently the greenhouse must of necessity be very much crowded with plants that would do elsewhere if room could be found for them. Assuming that in this house there is a mixed collection of plants in and out of flower, it will be advisable to always admit plenty of air both front and back if a lean-to house, or at the top and both sides if a span-roofed structure.

It will be well to put on a slight shade over the sunny side of the roof, either by a thin blind which can be rolled up and down at pleasure, or by a thin coating of a mixture of whiting and milk, or, in the absence of the latter ingredient, add a handful or two of finely-sifted quicklime, just sufficient to make it cling to the glass. If too much of this is put in it burns as it were on the glass, and it is most difficult to wash-off again. I mention this plan not because I consider it the best, but in the absence of a blind some sort of shading is necessary for such plants as Azaleas in bloom, Camellias making their growth, and also the most of the greenhouse Ferns. The Azaleas should be kept in the coolest part of the house, where they ought to last in bloom for some time. Camellias growing should if possible be grouped together so that they can have separate treatment, which should be a gentle syringing morning and evening. Water freely at the root, and occasionally use clear liquid manure.

Heaths of the hyemalis, or winter-blooming varieties, should be cut-back at once if not already done, and as soon as they break into growth again let them be potted, giving them a sandy peaty soil with a very little finely-sifted loam added, and powdered charcoal. When they are advanced sufficiently afterwards they may be placed outdoors for the summer, taking care that the sun does not play too strongly upon the pots, which is injurious to their fine hair-like roots. When potting them the nature of their roots requires that the soil should not only be thoroughly well mixed-up by the hand so as to ensure a proper distribution of its ingredients, but it should be made very firm, the fine roots are then more likely to take hold of it. Epacrises out of bloom must also be cut-back considerably, say to within an inch or two of the old wood. When these break again treat them the same as Heaths.

As to the potting of Azaleas and Camellias, I always shift them while they are making their young growth, while others practise such work when they are setting their flower buds—that is, just as growth is finished. In a greenhouse, where so many plants have to be grown, it is best at this time of the year to place all the blooming plants by themselves, reserving a place to group all young growing plants and those that want different treatment. They will then have the chance of receiving the treatment they require.

Fuchsias should be at once shifted and grown-on for autumn blooming; they will require moisture overhead and frequent stopping of the shoots. They will also, if well drained in the pot, need an abundance of water at the roots. If it is necessary to have a few in bloom earlier than the rest leave off stopping them, and they will soon flower. Balsams, Achimenes, and Globe Amaranths may be associated with the above, also Coleuses, Hydrangeas, Gesneras, and Gloxinias.

In vineries which have been allowed to come on naturally the Vines will now require attention in thinning out and tying down the shoots to the wires. This process requires care, for the shoots are very brittle, and if tied down too low at first many of them will snap asunder, causing a blank that looks badly and cannot well be filled up afterwards. As soon as the bunches are well out clear of the shoot, sufficient to see what it is likely to be, stop the shoots one or two joints beyond it, and as the extremity of this will break again stop this one joint beyond that again, that will be leaving one joint and one leaf at each stopping, which is plain enough for anyone to know how to do it; in these matters one can scarcely describe in too plain terms. A little fire heat at night will be required to keep up a temperature of 60° at night, which it ought to be now, and about 70° or to 75° by day. Close the house with sun heat by half-past three P.M., and towards the latter end of this month an extra half hour may be taken, and in the next month a little air all night will be an advantage. Of course moisture in the atmosphere and over the foliage at closing time is a necessity to keep in check that dreadful pest the red spider.

There is another matter of the greatest importance in Vine-growing, and that is not to delay the stopping of the shoots too long, for when so much has to be taken off at a time it gives the Vines a check and injures them. If the stopping is attended to it can be done efficiently with the thumb and finger, and with ease. The foliage left will thrive amazingly, and become both strong and large. The strength of the bunches and the size of the berries are much improved by a timely attention to this essential practice.

Now we come to the garden frames, which of course will be crammed with bedding plants; these must of necessity have all the air possible according to the weather, so as to shift the plants under protection to outdoors as soon as possible. This will give room for such plants as Chrysanthemums, Cockscombs, young Fuchsias, Balsams, and the preparation of Chilies and Capsicums, ridge Cucumbers, and Vegetable Marrows for planting out as soon as the beds can be made ready for them; in fact, I assume that all these are in their seed pots and ready for potting off as spaces are cleared for them. Then there are Melons, such as Little Heath and Beechwood, two good sorts for an amateur to grow; and frame Cucumbers, such as Cooling's Derbyshire Hero or Lord Kenyon's Favourite, should be planted out on beds of mild heat, and grown on quickly. Primulas, Cinerarias, and many other plants for which the frames will be required grow freely at this time of the year if only the proper attention is bestowed upon them.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

HARDY FRUIT GARDEN.

A continuation of such fine mild weather as we are enjoying at present will answer admirably for all sorts of out-of-doors fruit trees. A steady frost on calm nights when the ground is dry does not injure the blossoms much if it is not more than 2° or 3°; but on Sunday morning, the 25th, the thermometer on the open lawn fell to 24° Fahr., or 8° of frost; the early Potatoes under a wall with a west aspect, and which had been exposed on three previous nights to 4° of frost apparently uninjured, succumbed to a frost so severe as this. The blossoms on Currant, Apple, Pear, and other trees that were in flower do not seem to have suffered from it; indeed not a leaf or petal was browned. Many persons advocate shaking a little rough hay over Currant and Gooseberry bushes when they are in flower, the late Mr. Robert Fish amongst them. It causes the garden to look untidy and scatters the seeds of different grasses and strange weeds over the ground, which more than balances the advantages of the practice.

There is now a good opportunity to look after the different insect pests that attack hardy fruit trees. The Gooseberry caterpillar may be readily hand-picked in its early stages of development, or the affected parts dusted with white hellebore powder. If the mould under those bushes known to be attacked the previous season had been removed to the depth of 3 inches, and some fresh rich soil put in its place, the pest would have

been destroyed, and the bushes would be much stimulated by the surface-dressing. The caterpillar of the Lackey Moth will also be on the move, but if previous instructions as to looking out for the eggs at the winter pruning has been attended to, most of them will have been destroyed.

For a number of years the huge caterpillar of the Goat Moth was very troublesome; it had been long unmolested amongst the old trees, and from these many of the branches and even main stems of the young trees were destroyed. They bore into the centre of the young branches and work upwards until the part of the branch above the place attacked is destroyed; they can, even if deeply embedded in the trees, be killed with a piece of stiff wire. A fine Weeping Elm tree was killed by them. The tree was attacked at its base, and before the place was observed the mischief had been accomplished. As many as a score of specimens of the caterpillars were hooked out at once, and many more subsequently. An old Privet hedge was also a large pasture ground for them, and it soon became unsightly by the larger branches dying. The best way to eradicate them in this case also was to cut over the branches attacked as soon as they were observed.

The small bud worm that attacks Roses is very prevalent this season, and is also to be found on Morello Cherry trees. The young shoots are much checked in their growth by it. Hand-picking is the only remedy; but though tedious it is effectual. Many gardeners know quite well how to destroy the natural enemies that attack their crops; that is not the difficulty. At this season how to find time to have all the work forward is the question. What with crops to be put in for succession, attending to those that were put in early, and the immense number of bedding plants to be watered and moved about in May, fully employs the time of all the available labour. However much requires to be done, the best way to get through with it is not to try to do everything at once, but to do one thing at a time, and do it thoroughly.

Ran the hoe through Strawberry and Raspberry quarters. It is of great importance to have all permanent crops well hoed and quite free from weeds before they are too far advanced in growth, or they may be injured by working amongst them. If it is intended to grow the Strawberries for exhibition they must be well thinned-out, leaving about twelve or eighteen fruits on each plant; but this must not be done too early, at least not before the fruit is set, as frosts sometimes cut off the early blossoms, and the later flowers are those that produce the fruit; these, though inferior, are better than none.

VINERIES.

We have so fully described our routine work in previous numbers, that little can be added, at least to the work in the earliest houses. Nothing is now needed except to see that the ventilation is attended to, and the atmosphere not allowed to become too arid. Ventilation of vineries is so important that a few words on this may not be out of place at this time. Where the fruit is colouring it is a mistake to allow the temperature to fall too low. It is all very well in theory to say that the night temperature is low out of doors, and yet Grapes colour well and are not subject to shanking, yet in a house with a low temperature at night they will shank. The temperature ought to be 60° at night when Grapes are colouring, with air on all night; and as the sun acts upon the glass in the morning, the ventilators, front and back, ought to be opened, so that a very high temperature is avoided. In dry hot days sprinkle a little water on the paths and borders.

It is in houses where the fruit is setting that the greatest care is required. Let a keen east wind blow directly upon any of the bunches at this time, and see if the berries will not be rusted; but how to avoid this is the difficulty. The only way is to exercise great care at such a time, and open those ventilators where the wind is not blowing. Air cautiously at all times, not forgetting the oft-repeated injunction to admit air at the highest part of the house at 6 A.M., even if it should be cold. It is better to admit just a little air, and have rather more artificial heat to keep the house up to the required temperature.

GREENHOUSE AND CONSERVATORY.

The Camellias have not quite done flowering; those that have finished have been removed to one of the vineries. It is not always convenient to find a house exactly suitable in all respects for Camellias after they have done flowering. It may be as well to state that now is the time to force them if a succession of flowers is desirable. Those intended for the latest flowers may be allowed to make their growth in the greenhouse. The earliest-flowering plants ought to have made their growth by this time, and the buds to be forming in a cooler house. Our plants are in a late vinery, where they are partially shaded by the Vine leaves. They are well syringed two or three times a-day, and the moist genial atmosphere causes a strong healthy growth. When the buds are well set the plants are removed to a cooler house, and ultimately either to the greenhouse or out of doors. The plants will not bear forcing in the autumn after the buds are formed; if it is attempted they will drop off.

Azaleas are a grand feature in the greenhouse until the end of June. The earliest-flowering varieties are in flower without any forcing except to keep the house close by day and shut-up earlier at night. Of course the plants should be quite free from insect pests at this time. Thrips are destroyed either by fumigating or by dipping the plants, if they are not too large, in a tub of some solution that will kill them without injuring the leaves. There is one advantage in dipping the plants—viz., that if there are any red spider these will also be destroyed, which would not be the case if the house was merely fumigated with tobacco smoke. Small plants of Azaleas should now be potted into pots a size larger. The Azalea is a rapid-growing plant if it has plenty of pot room; but if stinted in this respect it will still remain in good health, but the growths and flowers will be proportionately puny.

All hardwooded plants now claim attention. Where they are grown, as is usually the case, in a house with rapid-growing Pelargoniums and other plants, it is almost impossible to make good specimens of them. They must be placed in a position where the top of the plant is within, say, a foot of the glass, and no other plant ought to come in contact with it. Abundant ventilation is also quite necessary. Any of the later-flowering species that are not yet trained into shape should be done forthwith, as the flower buds are apt to be rubbed off if they are formed before the training is completed.

Stage and fancy Pelargoniums are now throwing up their flower trusses; and one thing we will notice as it is very important to successful culture—viz., Do not overpot. All this class of plants produce the most flowers and these of better quality if the pot is crammed quite full of roots at the time the flower trusses appear. It is marvellous the number of good trusses of flowers that can be produced on a small plant in a 5 or 6-inch pot. Green fly persistently attacks Pelargoniums of this class, and the plants must now be perfectly cleansed of them by fumigating. If they are not clean before the flowers open, it is not possible to destroy them after without injuring the flowers. The action of the smoke causes the petals to fall off in showers.

Roses in pots for late flowering have been attacked by the bud worm and aphis; the latter was destroyed by fumigating, and the other by hand-picking. These matters must be attended to at the moment. We destroyed mildew on its first appearance by puffing sulphur on the leaves.

If cuttings of the perpetual-flowering Carnations have not been put in they ought to be done at once. Ours were struck early and have been potted off. The old plants are now very gay with flower and are highly prized. Some of the recently introduced varieties are a great advance on the old sorts, although a few of the old sorts will still hold their own. The beautiful dwarf-flowering flesh-coloured variety, Miss Jolliffe, is very distinct; it is one of the easiest to propagate, and produces the largest number of flowers.

Mr. Charles Turner of Slough has sent out some really fine and distinct varieties recently. Empress of Germany and King of the Belgians are two of the best of them; Diana, Picturata, Proserpine, Le Grenade, Gloire de Lyon (a fine flake), Celestial, Vulcan, and Avalanche are also distinct.

Pot Fuchsias, Zonal Pelargoniums, and other plants for autumn and succession flowering.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Ellwanger & Barry, Mount Hope Nurseries, Rochester, N.Y.—*Illustrated Catalogue of Ornamental Trees.*

Dicksons & Co., I, Waterloo Place, Edinburgh.—*Descriptive List of Florists' Flowers.*

HORTICULTURAL EXHIBITIONS.

SECRETARIES will oblige us by informing us of the dates on which exhibitions are to be held.

BATH.—May 12th, September 1st and 2nd. Mr. B. Pearson, 13, Milsom Street, Sec.

BLACKBURN.—May 17th, 18th, and 19th. Mr. W. Ditchfield, Hon. Sec.

CRYSTAL PALACE COMPANY.—Flower Show, May 29th; Rose Show, June 19th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.

COVENTRY.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.

LEEDS.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.

BURTON-UPON-TRENT.—June 16th. Mr. Wm. Shave, Bond Street, Sec.

JERSEY.—Rosee June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.

GLASGOW.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.

FAREHAM.—June 23rd. Mr. H Smith, Sec.

EXETER (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.

REIGATE (Rose).—June 26th, 1875. Bushby Britten, Esq., Hon. Sec.

WISBEACH.—June 30th. Mr. C. Parker, Hon. Sec.

MAIDSTONE.—(Roses), June 30th, at Viuters Park. H. Benstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.

BIRMINGHAM.—July 1st, 2nd, 3rd, and 5th. Mr. Quilter, Aston Park Sec.

SPALDING.—July 1st and 2nd. Mr. G. F. Barrell, Hon. Sec.

SOUTHGATE.—July 3rd. John Miles, Esq , Hon.-Sec., Southgate, N.
DURHAM AND NORTHUMBERLAND.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.
GRANTHAM.—July 7th and 8th. Schedules, &c., from Mr. Lyne, Bookseller.
FROME (Rose).—July 8th. Mr. A. R. Baily, Hon.-Sec.
KILSUY.—July 8th. Sec., Mr. C. E. Bracebridge.
NOTTINGHAM.—Rose Show, &c., July 8th, 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.
OXFORD (Roses).—July 9th. Mr. C. R. Ridley, Hon.-Sec.
HEWORTH.—July 14th. Mr. R. H. Feltoe, Heworth, York, Hon.-Sec.
OUNDLE.—July 14th. Mr. Alfred King, Sec.
TONBRIDGE.—July 14th. Mr. W. Blair, Free Press Office, Hon.-Sec.
WIMBLEDON.—July 15th and 16th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon.-Sec.
DARLINGTON.—July 15th, at Southead. William Hodgson, Sec.
BRECON.—July 22nd. Mr. W. J. Roberts, Sec.
HELENSBURGH, N.B. (Rose Show).—July 23rd and 24th. Mr. W. Uro Waddell, Sec.
CLECKHEATON.—July 24th. Mr. S. H. Williamson, Hon.-Sec.
PRESTON.—July 28th and 29th. Mr. W. Troughton, 4, Church Street, Hon.-Sec.
SOUTHAMPTON.—July 31st and August 2nd. Mr. C. S. Fuidge, 32, York Street, Lower Avenue, Sec.

TO CORRESPONDENTS.

*** **All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.**

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

BOOKS (*F. W.*).—Our "Fern Manual" contains a descriptive list of greenhouse Ferns and how to cultivate them. A new edition is now being printed. (*Alliance*).—Our "Garden Manual" contains the information you require. You can have it free by post if you enclose twenty postage stamps with your address.

REPOTTING AZALEAS (*East of Fife*).—The plants, now that they are growing freely, should be repotted in sandy peat, affording good drainage. Water carefully for a time after potting, and keep in a house with a brisk moist heat as that of a vinery at work; sprinkle overhead morning and evening, keeping the plants in heat until the growth is complete and the buds set, when they should be removed to a cooler and more airy house.

CHARACTERISTICS OF SHOW FLOWERS (*J. A.*).—Our "Florists' Flowers" contains many characteristics. You can have it by post if you enclose five postage stamps with your address.

SOUTH-WEST WALL (*Bluebell*).—Any plants or fruit trees you like to plant against it will succeed. We cannot answer particularly so vague a question. We cannot guess what kind of plants or fruits you would prefer.

SEEDLING ANEMONES (*L. L.*).—Your seedling Anemones are all varieties of Anemone hortensis except No. 3, which is a variety of A. coronaria. Some of these varieties of hortensis are very pretty, especially No. 2. The white-flowered one, marked No. 4, is Anemone nemorosa.

LIQUID MANURE FOR ASPARAGUS (*L. I. B.*).—The finest Asparagus we ever grew was watered with house sewage. A trench drawn between each two rows was filled daily. The drainage from the stable one gallon to twenty gallons of water may be used. The period for applying it is now, and as long as cutting continues.

SYCAMORE TREE (*J. S.*).—It can only be the outer bark that is decayed, or the tree would have died. Such being the case you may remove the earth from round the tree, and cover the place where the bark is decayed with a plaster of cow-dung and clay.

GRAPES SPOTTED (*E. Smith.*).—The roots are inactive. If the roots are inside the house, water them copiously with weak liquid manure slightly warmed. If the roots are outside the house, put a heap of hot fermenting dung over them.

CALL DUCKS IN GARDEN (*C. A. J.*).—They will pick up slugs, and do little or no injury to the plants beyond resting on a tuft of some creeper. If there is grass around the water in your garden they will not eat other green leaves.

SOAPSUDS FOR MANURE (*C. Y.*).—They are slightly fertilising, and their benefit arises from the soda and the fatty matter combined with it. If used as you propose, in combination with a manure containing sulphuric acid, the fertilising power would be increased. The acid would combine with the soda, forming sulphate of soda, which is found in most plants, and has been applied beneficially to Potatoes and Peas.

DAHLIAS FOR EXHIBITION (*Eda*).—James Cocker, purple; John Standish, bright red; Herbert Turner, French white, with a soft tinge of lilac; Arbitrator, buff or fawn, suffused with purple, yellow at the base of petal; Mr. Sinclair, rose, tipped purple; Leah, golden yellow; Ovid, puce; Thomas Goodwin, maroon; Alexander Cramond, maroon, shaded with crimson; Flag of Truce, white, occasionally tipped lilac; Duke of Cambridge, shaded orange; William Pringle Laird, lilac. *Fancy:* Dolly Varden, white, striped with purple; Mrs. Saunders, yellow, tipped with white; Remarkable, reddish buff, striped with maroon; Flossie Williams, dark, flaked with purple crimson; Ebor, chocolate, dark maroon striped; Viceroy, rosy lilac, crimson stripes.

SELECT STOVE ORCHIDS (*Idem*).—Cattleya Mossiæ, Dendrobium Bensoniæ, Lælia purpurata, Masdevallia Harryana, Odontoglossum Alexandræ, and Odontoglossum grande. For baskets, Dendrobium Parishii, D. chrysanthum, and Stanhopeas devoniana, insignis, oculata, and tigrina.

LILIUM BROWNI (*H.*).—We can only hazard a conjecture that the Lilium you had as "Bruno," is Browni, also known as L. japonicum. It attains a height of 2 to 3 feet, having four or five large white flowers, richly tinted externally with brownish purple, or it may have been one of the varieties of longiflorum, which are dwarfer.

PRIMULA JAPONICA SOWING (*Villa Garden*).—Sow now and place in a mild hotbed, keeping the soil moist, and the plants, if you are fortunate in having new seed will soon be up, and will flower next spring, but if the seed be not new it is likely germination may be deferred until about this time next year; therefore, if the seedlings do not appear shortly after sowing retain the pot or pan, and keep it moist, by which you may be rewarded in due course with plants. By seed sown so soon as it is ripe we have had seedlings in a week after sowing. Guard against, or keep a good look-out for, slugs, they being very partial to the seedlings.

TRAINING VINES (*F. I.*).—The shoots which are to form the spurs should be 1 foot apart on opposite sides of the rod, so that on each side of the rod they will be 2 feet apart, and the cane or rod between them should, of course, be clear of shoots, rubbing off any eyes that may appear upon those spaces. The shoots should be stopped one or two joints beyond the bunch, better the first if space be limited, as they will break again, and must be pinched to one joint—*i.e.*, each succeeding growth, or if you have ample space stop the shoots two leaves beyond the bunch. All the laterals should be removed but the two lowest, and those stopped at the first leaf. Stop the leading cane in the ground vinery 1 foot from the end, its succeeding growth to one joint, and the laterals upon it to one joint, and the succeeding growth stop at the first leaf. There is no necessity to add to the length this year, and growths made outdoors would be of no practical value to the Vine in the ground vinery.

WEEDS ON LAWN (*P. T. B.*).—Lawn sand is highly spoken of, but we have not used it. Write to the advertiser and ask for particulars. We should not think the dressing with soil as you propose would be advisable until the lawn sand had been applied, and had had time to exert its influence upon the weeds, and then you may dress with the rich compost, and sow with grass seeds as you propose; but do not sow the seeds first and then dress with the compost, which would be to bury the seeds too deeply. They should not be more than lightly raked, or better well rolled-in.

SHRUBBERY BARE AT BOTTOM (*Idem*).—The shrubs are bare at the bottom from growing too thickly. Both Laurels and Laurustinus are good growers, and bear cutting well. They will start from near the base and give you the bottom growth required, providing that light be afforded. We should not dig amongst these shrubs, but as the ground is liable to be baked in summer, the surface of the soil may be loosened with a fork, just pointing it over, and if you could give the shrubs a light top-dressing of rich soil they would amply repay you in growth. What they require to give you closer growth is pruning more closely, which may be done now. The fowls do the shrubs no harm, but are more likely to do good in devouring numberless insect pests, which not unfrequently commit great havoc amongst shrubs.

MARANTA BARAQUINI CULTURE (*A Subscriber*).—Maurantas to do well require a rather warmer and moister atmosphere than is afforded to a majority of stove plants. The temperature at this season should be 70° to 75° by day from fire heat, and 85° to 90° with sun heat, and at night 65° to 70°, affording shade from bright sun, and keeping up a regularly humid atmosphere. Lightly sprinkle the plants overhead morning and evening, and keep the paths and every available surface wet. Use water of the same temperature as the house. The appearances you state as those of your plant are such as are usually a result of the growths being made in a low temperature. Moderate ventilation only is required, and this without causing sudden cooling or drying of the atmosphere. The present is a good time to repot the plant. Free watering is necessary.

CLIMBERS FOR GREENHOUSE WALL (*H. W.*).—If shaded by Vines on the roof, plant Camellias. If not shaded, Mandevilla suaveolens and Lapageria rosea.

DESTROYING WOODLICE (*J. H.*).—They are very wary poison-takers, and are not easily vanquished by other means. A ready means of destruction is a toad or two in each house, which feed upon these and other insect food. By having one or two in each house we have found these animals keep the wood lice in reasonable bounds. Another plan is to place some pieces of boiled potatoes along the sides of the walls, and other places where they congregate and hide, covering the potatoes with a little hay, and in the morning following a two-nights enticing, pour upon the hay boiling water, which, of course, destroys all it comes into contact with. Places should be chosen for the enticing and scalding process where the pouring of boiling water will not do any harm to plants or their roots. We have also found great service from mixing a tenth part of arsenic with finely ground oatmeal, moistened with a little olive oil and thoroughly mixed, forming a crumbling paste, and laying this on pieces of slate in their haunts, taking care to keep it from domestic animals.

CALCEOLARIAS DYING (*Idem*).—It arises from a decay of the neck or collar of the plant, and is mostly a consequence of the plant in a young state having been pot-bound, and at potting being placed deep in the soil, so that the neck is covered. Watering upon the stem is also a prolific source of the evil. Calceolarias delight in a cool and moist atmosphere. Soil also has great influence, and we have found that soil of a peaty nature is more inimical to the plants than that of a loamy character. The whole subject is involved in mystery as to the cause; the decay is common, not only to Calceolarias, but to Cinerarias and Humeas.

INSECTS IN GREENHOUSE (*D. M. M.*).—The beetles you have sent are the common brown weevil, Otiorhynchus sulcatus, which is far too well known as most destructive to pot plants (gnawing the roots just below the crown), also to buds of Vines, &c. We fear two or three females must have found their way into your house and there laid their eggs; but surely their white fleshy grubs must have been at work for months or weeks without you having noticed them. In their present state there is no better plan than that which you suggest of hunting for them with a light after dark, and laying a sheet under the plants, on which they fall as if dead.—I. O. W.

ANTS IN HOTBEDS (*Mrs. J. Ll. M.*).—The best means of destroying them is to place small pieces of beetle poison about the size of a pea on a piece of slate in their runs, taking care that no domestic animal partakes of it. Another good plan is to have two pieces of sponge, dry and clean, and on two sides smear them with honey; place those two sides together, and put the pieces in the haunts of the ants, which will pass into the sponge, and may be immersed in boiling water. It answers nearly as well to dredge the sponge with powdered loaf sugar; the sponges having been washed clean and dried may be used again and again. Ants are also fond of olive oil; this, placed about 1½ inch deep in jam pots put in their runs will take them in great numbers, it may be left until rancid, then the pots should be thoroughly cleaned and renewed with oil. The best salad oil should be used.

NAMES OF PLANTS (*E. S. H.*).—It is the double white Wood Anemone, Anemone nemorosa flore-pleno. It is sometimes called the Double White Hepatica. (*J. A. O.*).—The white Narcissus is N. pseudo-Narcissus var. Moschatus; the yellow one, Double Campernelle. The Scilla is amœna. The others Primula ciliata purpurea and Euphorbia hibernica. (*H. W.*).—The Jonquil, Narcissus Jonquilla. It is a native of Spain, and described as long since as the reign of Elizabeth by Parkinson as the "Junquilla," and in every European language it has a similar name allusive to its rush-like leaves, from Juncus, the Latin for a Rush. (*Subscriber's Daughter*).—Claytonia perfoliata, and the Wood-rush, Luzula campestris.

POULTRY, BEE, AND PIGEON CHRONICLE.

COULEUR DE ROSE.

WE suppose at times the hues of *couleur de rose* are wont to bathe everyone and everything in its attractive tints. This descriptive epithet, imported from a foreign country, is untranslatable in English. If we hunt the term out in a French dictionary we find it means something bright and joyous. It is all very nice in its own country, where it is used in a much more delicate way than it is here, for in our language it generally comes to mean something bathed in bright and delusive colours, and so may be termed in our significant word—humbug. Now-a-days we find this rose tint laid on many things in a delicate manner, and so making them appear under false colours. Many, too, put on rose-tinted spectacles, as it were, and behold things looking fair and lovely, but when looking at them with the ordinary eyes of life are disappointed and find out what reality is.

In the poultry world, too, many look on *couleur-de-rose*-bathed scenes, and they themselves frequently scatter the tinted drops on their own property. Many of the poultry people dip their advertisements in this flattering liquid and make them "fair and false, glittering and delusive;" but the rose-coloured garb does them no good, while it mortifies and often hurts the feelings of others. We will take one or two *couleur-de-rose*-tinted cases and see what we have dished up for us in this charming colour. Let us imagine Mr. Paint-it-bright is speaking. "What! My dear Plain-colour do you mean to say that is the best Brahma cockerel you have? I am surprised! Why, I should beat you all to fits if I exhibited. You should see mine—such combs, such tails, and such leg-feather! Oh, what a pity it is you live so far off and can't come and see my stock, for I could put you up to a wrinkle how to get good colour on the thighs and breasts. But take my advice, my boy, and get something better in future." Whereupon Plain-colour is filled with jealous ideas of the most burning character, for he has done his best to get the finest cockerels extant; and though he would give his hand almost to see and possess one of Paint-it-bright's marvellous birds, still he knows they are to him almost as inaccessible as the Arctic Regions.

But something quite unexpectedly turns up and Plain-colour has to go down to Roseshire, and when his business is over straightway he rushes off to see Paint-it-bright's wonders. The hideous reality breaks on him, and he finds *couleur de rose* has indeed been lavished over the description of the birds, for they have ugly coarse combs, brown wings, and thighs mottled to a frightful extent. Still, though he has been so duped he omits to tell his experience to his friend Mrs. Wantcups. She, poor lady, is in search for a sitting of eggs of a very popular and handsome breed called Black Feather-legs; so she turns to our poultry Journal and cons the advertisements. "Victory!" she cries; "here are eggs to sell from some splendid Black Feather-legs. They have only been shown a very few times and they won all kinds of things, beating all kinds of people, who have hitherto carried all before them till this grand yard burst upon the fancy." Mrs. Wantcups straightway sends off her P.O.O., and the eggs come. Poor lady! the advertisement had truly been tinted. The birds had been bred by someone else, and handed over to the then owner in a state of exquisite condition, which had been the cause of the winnings in question, and at the very few shows where they had since won, the great guns which were described as having been so ignominiously beaten had been represented there with only their third strings, their first and second being away at other places winning cups and prizes of themselves much more valuable, and likely to bring much greater glory to the exhibitor. Again, had she looked she could have seen, perhaps, that the rose tints had been laid on coarsely and unevenly, not even thick enough, perhaps, to hide an ugly mixture of pronouns, which is sometimes observable in such painted advertisements. Poor Mrs. Wantcups! she will know in future what *couleur de rose* means.

Other employers of this bright colour there are, wholesale dealers, who go about brightening up everything—poultry shows and poultry committees, poultry managers and poultry secretaries. They go to exhibitions, and they attend sales; they brighten-up, as it were, the plumage of their birds, and distil fair drops of *couleur de rose* on the combs of their fowls; they write their letters with rose-coloured ink; their very pens give rose-coloured accounts of how their Bantam cock, now for sale, is the best out; or how they would never sell that Tumbler cock if the hen had not died.

Couleur de rose, too, we find mixed up in new kinds of goods, and little sparkling stars of it on new-fashioned coops and wire enclosures. Certainly the poultry world often is blessed with a rosy shower. And then there are some who go to exhibitions to pick-up news and retail it out again; who make friends with the committee, or get introduced to the secretary through some other rose painter. These artists especially love shows where the committee in a time of success, and as a reward after hard work for months in organising their show, go in for a bottle or two of clicquot in some cosy office, and offer, in the exuberance of their joy at seeing their room full of visitors, a glass of the thrilling beverage to our friends; and they then drink of the sparkling vintages out of rose-tinted goblets, and go home, on their journey in imagination dipping little slices of bread into the cups of wine now become flat and insipid, trying to reanimate their brilliancy with bright spluttering bubbles, and commit to their note books all that they saw fair and beautiful, and forget the thorns that grew beneath the rose's petals.

Again, some publish little books on poultry, and tell of profits that set the readers' brains whirling, and make them hasten to Stevens and embark on the poultry mania. All humbug. They can only tell the old story; but here they have dished it up tastefully with a rose-coloured sauce, and the tints have been so plentifully spread, that the wretched maniac who took the poultry farm, thinking his fortune was made, curses the day he ever read the delusive pamphlet.

We have said enough, shown instances enough, and we can readily see that those to be our friends in this the poultry fancy, as in other scenes, must be those who present themselves and their goods to the world through no rosy-tinted windows, but honestly and truthfully through panes of plain glass, where *couleur de rose* exists not to humbug outsiders, where the fancy in walking through the world may see truthfully what the man and his goods are.—W.

A PROPOSED ESSEX AGRICULTURAL SOCIETY'S POULTRY SHOW.

I HAVE just received the schedule of a poultry show to be held at Brentwood, in connection with the Essex Agricultural Society. The latter fact, to which attention is invited, is a somewhat ominous one. Last July a show was held at Stratford under the same auspices; I was fortunate enough to be a prize-winner, but did not succeed in obtaining my prize money. For months I wasted letters and post cards on Mr. Cornerford, the Secretary, who never deigned to answer me till I sent him a somewhat forcible reminder, upon which he coolly wrote back that "he regretted he could not comply with my request, as his books had long been closed." I therefore inform the public of the way in which the Show in connection with the Essex Agricultural Society was managed last year. How far the said Society is legally responsible for Mr. Cornerford I do not pretend to gather from the singular ambiguity of the schedule's heading, but it is sufficiently discredited by his repudiation of exhibitors' just claims. I observe that there is this year a new Committee, among them I see the name of a clergyman which will command general respect, but I have yet to learn that a society by changing its officers obtains liquidation of its debts.—O. E. CRESSWELL.

EGGS.

I NOTICE a contribution on page 283 signed "W." under the above heading, and although I coincide in many of the statements there contained, I believe the following remarks will show a different side of the picture.

I have been a large breeder of poultry during 1874, having reared over 1300 fowls, many being sold at over a sovereign each, and as much in one case as £8 10*s.*, and now have upwards of two hundred head pure and crossed for certain purposes; but as "W." says, wishing to make my poultry-yards more attractive, early this year I ordered sittings of eggs from various advertisers. Each sitting was carried by myself from the station to prevent any accident in shaking, and my results (after an expense of over £13 in eggs, besides buying broody hens for hatching from almost all parts of England at 4*s.* 6*d.* and 5*s.* each, and carriage in addition) are as follows, without mentioning names. Houdan eggs from Stonehouse, Gloucester: one contained a chicken, but could not survive the necessity of breaking away from the shell after twenty-two days sitting. White Cochins from Melksham; Crêve-Cœurs from Chatteris, Cambridgeshire; Golden-spangled Hamburgh eggs from Bourne, Lincolnshire; La Flèche, Houdan, Crêve-Cœurs, and Silver-spangled Hamburghs from Banbury; Silver-spangled Polands from Wivelscombe; Black Spanish from Penge; and out of the last-named nine lots not one single egg contained a chick or even sign of life.

Each egg which I have reserved for inspection, after making a small hole in the side, being perfectly sweet and the yolks perfect, and not broken or mixed up. My opinion goes with "W." that if an egg has been fertilised, and after forty-eight hours' sitting signs of life are evident upon breaking the egg; and if through too long exposure by hen or other cause, the life being destroyed, the egg becomes putrid, hence the appellation "addled;" whereas if, although cocks do run with hens, the eggs are not fertilised, after twenty-one days' hard sitting they are almost as sweet, as far as the yolk goes, as when they were laid. I can guarantee that each hen was sat in a separate place, with the board at front of the nest removed each morning, and never allowed off more than ten minutes, and food, water, and ashes ready for immediate use. To this matter of hatching I give my own personal attention for fear of neglect.

Now, on the other hand, I had a sitting of eggs from Instone, Devonshire, by error first sent to London, afterwards here, and out of thirteen eggs I have twelve chickens. Out of twenty-six eggs sent direct from the United States of America, travelling upwards of four hundred miles in the cars, then across the Atlantic, passing through the Custom House, and then through two railway offices in England, twenty-four hatched. I had also a sitting of Partridge Cochins from Woburn, Bedfordshire, and five hatched; and I almost think this sufficient proof that if eggs are fertile and fresh that carriage, if properly packed, has little to do with failure in hatching.

Now, "W." and the managers of other poultry papers recommend each egg to be wrapped in paper, then separately in a wisp of hay. I contend the less the eggs are handled the better; and to first roll them in paper, then roll them in hay, afterwards laying them down, then picking-up and packing, all tend to shake the egg, and when packed it seems to me that each egg then has a separate tendency to be shaken, being, as it were, on a spring mattress by itself; whereas if short-chopped hay and straw mixed, say three-quarters of an inch long, be used, and the eggs as laid be packed in that no shaking will hurt them if sufficient to fill the package is used, as one straw remaining between two eggs will prevent the friction, and this chopped hay and straw the more shaken the greater the tendency to form a solid mass. Bran, sawdust, sand, and other such articles, all go into smaller compass with very little shaking, and if a package is full to excess at starting on a journey, it is more than probable it occupies a sixth or eighth less space on arrival at its destination, and the eggs most likely shell against shell, and in most cases broken. This plan of packing was adopted in above satisfactory cases, and is now by me in sending eggs; and although I have sent them to all parts of England this spring, I have most favourable reports of the hatchings.

I for one do not hold with advertisers offering second sittings at half price, as it appears on the face too great a temptation to ill-disposed persons to send bad or tampered eggs the first time to insure a second order. I believe it eventually will come to legitimate breeders warranting the greater portion of eggs fertile, and in future I shall purchase from no one who will not give a guarantee I dare to give myself.

Most poultry fanciers know how much more certain eggs are to hatch in May and after months, and half the fault I believe—as I cannot think, bad as my luck in bought eggs this spring has been, that they have been tampered with—lies in the fact that during the cold months of spring the fowls are not fed with warmth-producing and sufficiently stimulating food. I have now alive and well, hatched from my own fowls' eggs, nearly 150 chickens and ducklings, and thirty-two hens sitting to hatch within the next ten days, and have found but three unfertile eggs. I do not speak of the early Ducks, as drakes are very liable to object, perhaps, to the best laying Duck, and my hens have laid throughout the winter an extraordinary quantity of eggs, and out of the large number I keep have this spring been able to keep them from becoming broody until quite recently.—Hampton-in-Arden.

RUSSIAN TRUMPETERS.

As Mr. Ure's account of the easiness with which these birds breed and rear young may cause some disappointment in those who intend to keep prize birds in England, I will quote the letter of a gentleman in Ireland who keeps these Trumpeters, and has taken prizes even when Mr. Fulton has exhibited.

I have before stated that a great Trumpeter fancier cannot get two imported prize birds to breed successfully. Now for the details of the Irish fancier: "Two-thirds, if not three-fourths, of the young (of imported birds) have not been reared, or have died in their first moult." Of the doings of a pair of thoroughbred birds this season the gentleman writes, "They have hatched two sets of eggs, but all four birds have died at about five days old, although changed under undeniably good feeders. I do not know why they died, as they hatched out strong without any assistance, and they did not die from any fault of the feeders. The first year I had three sets of young; all died in the same unaccountable way, not from cold, as the old birds had not left off sitting on them. The old foreign birds are excellent feeders, as they invariably rear the feeders' young birds if allowed, although their own young die under the feeders." These foreign birds "are evidently very much inbred, and in consequence some individuals are barren.

"I have now two foreign birds of my own breeding, both sterile; the hen only laid one small egg last season, and has never laid another. They have both been tried with various half-bred hens and cocks without success, but their brothers and sisters are now breeding freely." Again, "I have not as yet reared a thoroughbred bird this season." Again, "When once reared and over the first moult they seem healthy enough." It would seem, then, that there is a special difficulty in inducing these birds to breed successfully. Probably Scotland does best for them, being nearer home.

I would thus sum-up the result of my inquiries: Foreign Trumpeters breed in England very badly, many hens will not lay, a very large proportion of the young die in the nest, and a large proportion of those which survive the nest die at their first moult.—Wiltshire Rector.

On reading "Wiltshire Rector's" remarks on Russian Trumpeters I felt sure he had been misinformed. This bird is not the only foreign Pigeon that used to be thought useless for breeding purposes in Britain, and I think I can give the reason. I have had more than once Fantails from India, useless but for show, splendid birds of the kind, and on inquiry where they were obtained I found they had been bought in the market of Calcutta.

Now the public market is like the auction room in this respect, that what you buy you take with all faults. In countries where fine birds are bred it is only the worn-out, barren, or otherwise useless birds that are sent for sale to the public market (occasionally a sound and good bird may be bought there), and this I think accounts for the fact that so many birds brought to this country by sailors are found to be non-breeders. Those birds, however, received from regular importers, though the price may be a little higher, as a rule breed well. Certainly even importers may have a useless bird thrown on their hands, but their purchases may be depended upon, as they buy not in the public market but from breeders.

The Trumpeter has always been a favourite of mine. His characteristics are so prominent; and one of them, his note, is most pleasing to me. Recording notes on the Trumpeters brings to my recollection a bird I used to have many years ago, but which I have not seen since—viz., the Laugher. The birds I had came from Jerusalem; they were brought by a sailor, and did not breed, but were grand feeders of Ponters. The Laugher is one of the old Toys, about the size of the Russian Trumpeter. The flight feathers were very long, no crest or rose, legs and feet free from feathers; and those I had, three in number, were mottled not unlike the Almond Tumbler, but with a greyish-white ground. When cooing to his mate the male bird would break into what resembled a very hearty laugh, and repeat this laugh three or four times.

The resemblance to the human laugh was so striking as to be utterly ludicrous, and caused myself and friends who heard them to join in chorus. I shall be glad to learn that Mr. Baily succeeds in securing some of this old and remarkable Toy Pigeon. I should like a pair, breeders if possible.—James Huie.

CANARIES.

When writing my notes on these birds in a previous issue of our Journal I unintentionally omitted to name one variety which I always had a great fancy for, and which I think is well worth the attention of Canary breeders, quite as much so as the Lizard, being a marked bird of handsome form—that is, the London Fancy Canary.

There is a fineness about this variety possessed by none of those I named. Young birds when displaying their black flights and tail have quite an exotic appearance, and their colours and form present the results of careful and high breeding. Like the Belgian it must have taken many years, perhaps many generations, to bring them to the perfection at which they now are.

I trust the breeders of the London Fancy will not stoop to artificial colouring in any form, but continue to produce birds intense in colour (as I have seen them) by means of careful selection.—James Huie.

Poultry Prizes at the Bath and West of England Show.—We have received the prize schedule of the Bath and West of England Society's Show, to be held at Croydon on the 1st of June and three following days. As heretofore the list is a liberal one, fifty classes being devoted to poultry, with prizes of £2 and £1 in each class, besides fifteen silver cups valued at £5 each, the winners of these cups receiving them in lieu of first prizes. There are sixteen classes for Pigeons, the premiums in each instance being £1 and 10s. The entries closed on the 4th.

The great care and attention paid to the poultry during so many years past cannot but insure the confidence of all competitors, and the rigid manner in which the regulation is carried out, prohibiting any "exhibitor or servant" having access to the birds until they have been judged, will meet with general approval.

CRESTED NORWICH CANARIES.

As proof of the high favour in which Crested Norwich birds are held, no less than 132 specimens were exhibited in the five classes at the last Crystal Palace Bird Show. Of late years especially, quality of breed and colour have been studied by fanciers who have much improved the Crested breed of Canaries. This improvement has been effected by crossing Norwich birds with the old crested strain, most of which formerly were of dark plumage and strong in constitution. From this cross has originated the title or appellation of "Crested Norwich."

In years past Crested Canaries were more familiarly understood by the names of "cappled" or "coppled-crowns," "tassel-headed," or "toppins," and even at the present period in out-of-the way districts of the midland and northern counties, where the intelligence of the more educated fanciers of the bird-world has not reached, may be occasionally heard some such designations applied to Canaries possessing this peculiar ruffled adornment of head feathers. And it would be a difficult matter to uproot fixed notions from the minds of some, particularly those in the rural districts, who will stoutly contend the point with you that a Yellowhammer is nothing but a Goldfinch.

I have frequently been amused whilst listening to contentions over the terms "caps," "crests," "toppins," or "tassels," but the arguments have generally ended without any decisive results. Some have wisely contended that the term "cap" applies to a bird with a covering of feathers over the entire crown otherwise than is the case with a crested bird, which is often somewhat deficient of feathers in the centre of the crown. Other fanciers have placed their faith in the word "toppin," because the feathers are elevated above the crown of the head. I prefer either designation in preference to the word "tassel," for the reason that this particular ornamental and decorative bunch may be worn or suspended from other parts than the head. In my opinion the word "crest," which signifies a plume, has a greater claim than all others.

Crested Norwich birds vary in general formation of crests from the massive made birds styled "Manchester Coppys," for instead of the crest in the Norwich graduating into smooth feathers from over the eyelids to the back part of the head as in the Coppy, the crest is mostly continued around the head, the feathers behind inclining upwards. This in most instances produces baldness, which is an eyesore.

Although breed and colour have been imported, the crests vary in form and appearance. Some crests, although thickly feathered, are short and stunted, and resemble a flower only half blown, appearing as though the feathers had been cropped-off over the beak. Such do not find much favour. A skeleton formation of crest, which is known by the large bald centre-piece of the crown with a thin line of feathers over the beak and eyes, is also objectionable, and will never make headway against a flowing, full-feathered, high-cultivated crest, which appears as though a brush and comb and smoothing-iron had been at work. I like to see the feathers fall heavily, regularly, and even over the beak and eyes, diverging from the centre of the crown which is termed the "pea."

In a spare-feathered crest one great fault is the mere outline or apology for a crest, with the "pea" nearly half the size of a threepenny-piece. Some crests partake of a more pointed or narrow form over the bill, but become gradually wider towards the back part of the skull, where they terminate somewhat square, and take an upward curl of feathers at the extreme sides. I consider such shaped crests defective, for the very reason that the greatest weight of the crest should be over the beak and eyes, with the crest somewhat compressed in appearance and fully developed. Dark crests show to greater advantage especially in full-sized crested birds, with an inclination for the dark feathers to be continued so as to form a short hood. They are more showy than button-crested birds, and are preferable to grizzled or clear crests, the latter especially showing to the least advantage. Still I have seen some such crests tolerably good. To increase or encourage size of crest it is advisable occasionally to breed with two buff birds, one crested and the other plain-headed of the crested strain.

There are two essential matters to study in the breeding of good Norwich Crested birds. In size they should not approach the Coppy breed; if so they run the chance of being disqualified when exhibited. Good healthy bold-looking birds should be selected for breeding purposes, and in matching avoid putting together a pair strong in colour, and each having crests.

The number of classes set apart in the schedules of the most important shows varies. Sometimes there are only a couple of classes, whilst at other times as many as five or six classes are set apart. The foremost or principal classes are those for even or beat-marked crested birds (yellow or buff), possessing dark crests and with an even number of dark smaller flight feathers, the remaining portion of the bird being clear, unless there be a dark feather on each side of the tail. Next to the even-marked birds stand those entirely clear excepting the crest. Crest is the chief point of perfection; condition, plumage, and other points of consideration being studied in judging as in other kinds of Norwich birds.

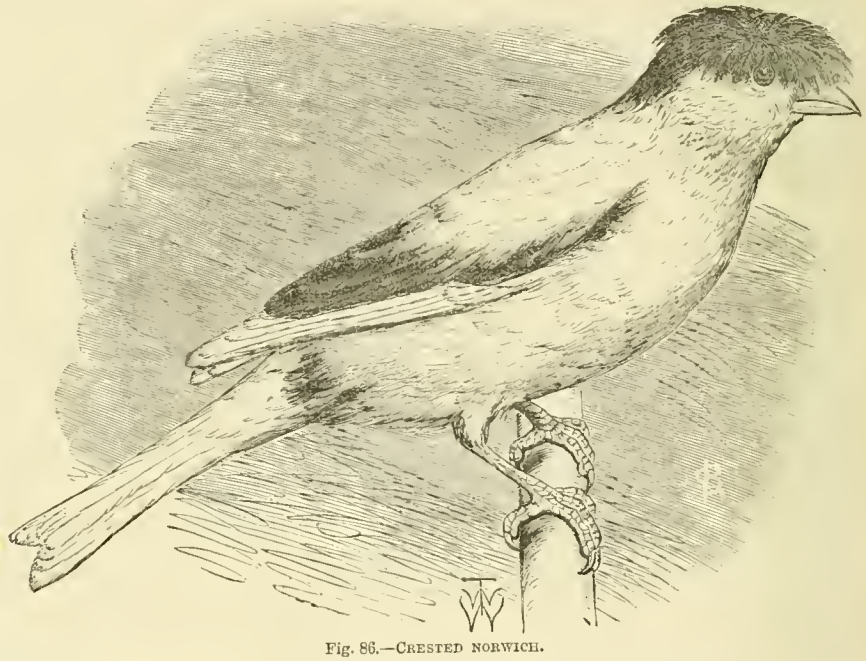


Fig. 86.—Crested Norwich.

The engraving we publish represents one of the finest specimens of a Crested Norwich it has been our pleasure to see. The bird is possessed of all the essential qualifications for the high honour it gained for its owner—Mr. Woodward of Derby, who exhibited it at the last Crystal Palace Show, and added a first prize to several others previously won. The bird is a hen, eighteen months old, and was exhibited in "Class 10, Evenly-marked Crested Buff Norwich." Thirty other specimens were shown in the same class.—Geo. J. Barnesby.

TRADE IN FOREIGN GAME AND POULTRY.

This has rapidly grown up within the past few years, and experience has almost solved that problem of food preservation wherein science is yet at fault. For instance, the poulterers who are consignees of birds from America receive great numbers of casks in which are now packed, with perfect safety, vast quantities of game that would inevitably have been spoiled if the same thing had been attempted with imperfect knowledge a few years ago.

The Prairie bird, a species of Capercailzie, which has the feathers down the legs, and which gastronomera have declared has the bitter back-bone so highly esteemed in the true Grouse, comes across the Atlantic with little or no injury from the voyage, though, it must be granted, with some little sacrifice of tenderness, by the method of preparation for packing. This

is, to take the bird fresh and to freeze it to the very middle. Thousands upon thousands are passed into freezing houses artfully constructed for the purpose. When quite stiff and hard they are taken out, wrapped in coarse paper like bottles of champagne, and packed carefully in barrels. The paper plays a very important part in the business. In the first place it is a non-conductor, and it therefore assists in the isolation of each bird, so that when the barrel is opened at the end of a fortnight's voyage the contents have positively not begun to thaw. Then, again, the wrappage keeps the feathers smooth; and the birds being more sightly find a better sale. It is said, indeed, that a shilling a brace, or more, is the difference between Prairie fowl which have been wrapped in paper and those which have not. As for the freezing process itself, something of the same kind has been an old practice in Russia and Canada for home purposes, and the Russians know well that the best way of thawing the frozen birds is to begin by putting them in cold water.

A more delicate bird than the Prairie fowl—namely, the Virginian Quail, is brought to English markets in the same manner as that we have described in the case of the Prairie hen, which, by the-by, is sometimes called—with sad ignorance of natural history—the Canadian Pheasant. Epicures may sneer at both these dainties; but they would not sneer at either were they to taste them skilfully prepared in New York or Montreal. Even here, after the freezing process, the packing, and the sea voyage, a housewife with a quick eye for the signs that make or mar a bird for cooking will be able to pick out a plump young brace from a row of these Prairie hens in front of a poulterer's shop. Up to the present time the outlay has been £93,000; and we believe that the round sum of £150,000 will be about the ultimate cost of this well-planned poultry market. — (*Irish Farmers' Gazette.*)

FEEDING TROUGH.

This is the best and handiest instrument for feeding bees that we have ever seen. It is made of tin, and costs 4*d*. It can be made of any required length, and narrow enough to enter hives of any kind. By filling this trough on the flightboard of a hive and pushing it into the hive the bees can be easily fed. The trough can be pushed 2 or 3 inches beyond the doorway, and

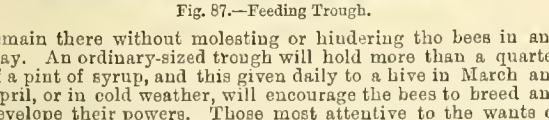


Fig. 87.—Feeding Trough.

remain there without molesting or hindering the bees in any way. An ordinary-sized trough will hold more than a quarter of a pint of syrup, and this given daily to a hive in March and April, or in cold weather, will encourage the bees to breed and develope their powers. Those most attentive to the wants of their bees in cold weather will generally have the largest harvests of honey at the end of the season.—A. Pettigrew.

LIGURIANS.

I had no wish to continue any controversy on this subject, but as Mr. Pettigrew challenges me I feel bound to reply. In the first place I never doubted the wisdom of settling the matter—*i.e.*, the superiority of Ligurians, for I consider the matter long since settled, and it seems to me on a par to trying the convict Orton over again. Your valued correspondent "B. & W." has said in your columns, "The breeding powers of the queens in my possession, particularly the hybrids, have been greatly in excess of anything I had ever experience of before. . . . I have found this fecundity quite a nuisance, as they have multiplied to such an extent in hives as to have occasioned an excess of swarming." I will quote no other opinions, but by reading any of the American, German, or English bee journals any apiarian will find numberless confirmations; so taking my stand on "B. & W.'s" opinion I will say although I never said it before, "If the Ligurians are better breeders, it follows they are better workers."

Instances are not uncommon of queens producing such a great quantity of brood that the hive has no space left available for honey storage unless a super be supplied, and then again if the super be removed at the close of the honey season the stock may die from famine unless fed with judgment. Experience and care will guard against both these contingencies, although perhaps the race would be blamed by the ignorant for the misfortune.

In the poultry world we do not find a breeder of Brahmas writing down Cochins, or the Dorking fancier maintaining a controversy to prove there is nothing so good as his particular favourites. Each have points of excellence, and so have the varieties of bees, so I say *Chaçun à son goût*.

If any of your readers wishes the trial made, why not make it himself? A fancy price need not be paid for queens. They may be imported from Italy in May and June at 10*s*. each, and the old queen of the swarm will be worth half the money to return to her hive, where she will recommence breeding without delay. I am not a bee-dealer (although, of course, I like to make money of my surplus swarms), but I will undertake to import any number of queens required at the above price for purposes of Mr. Pettigrew's wished-for trial.—John Hunter, *Eaton Rise, Ealing.*

SWARMING AND SUPERING.

Both wind and weather at present are favourable for bees, and favourable, too, for fruit-setting in the small orchards in this part of the country. The pear trees are now white with a galaxy of blossoms, and the bees are busy at work on them. Apple and sycamore trees are abundantly covered with flower buds, which are fast expanding. If the present fine weather continue for two or three weeks the probability is great that there will be this autumn a very heavy crop of all kinds of hardy fruit. And who can tell how much the country is indebted to bees for an abundant harvest of fruit? They gather great stores of honey and pollen from gooseberry and currant bushes, plums and cherries, pears and apples, and in doing this they help to a great extent to fertilise and set the blossoms. Such weather makes apiarians think of swarming, supering, heavy hives, great results, the Crystal Palace Exhibition, and the distinctive honour of being successful competitors there. We hope apiarians of all creeds and classes will have a favourable season for honey-gathering, and derive great encouragement and confidence from their own practice and success, as well as pleasure and stimulus from the apiarian *fêtes* that are promised us next autumn. Now let us have a few commonplaces touching general management.

Swarming.—By instinct and a law of their nature bees multiply, swarm, and thus form independent colonies and communities. Swarming is one of the most interesting features of bee history. Even the exploit of hiving his first swarm successfully causes a glow of pleasure to a beginner. If the present fine weather continue there will be many swarms in May, notwithstanding the cold spring. Many hives have their combs covered with bees, and comb-building has commenced in hives not full of combs. A hive filled with combs, and these combs covered with bees, is within three weeks of swarming in ordinary seasons.

Every bee-keeper may examine his hives easily by gently and slowly turning them up to see how much comb is covered. My bees are so accustomed to exposure in this way at this season of the year that they do not seem to be disturbed by being so turned up. Many visitors marvel at the quietness of the bees, as well as the quiet way they are handled. By putting a finger in the mouth of the hive, and raising the front of the hive high enough to have a peep inside, any bee-master may know, to a certain extent, how his bees are doing. All this may be done without smoke or the use of fustian rags. By using smoke from such rags a more thorough examination may be made. As soon as the bees can and do cover all the combs of a hive, eggs are set in the combs from side to side. In three weeks all this brood will be hatched (and more set as it is hatched), filling the hive full enough for swarming. Swarming is hastened, too, by the storing of honey in the combs. The accumulation of honey in the upper and outside regions of a hive compresses the bees in the lower regions, &c., nearer the door, and often sends them outside for room and air. As bees approach the swarming point the heat and noise of their hive become very great in honey weather.

Those who manage their bees on the swarming system should have the hives ready for their swarms. The largest sizes of hives should be peopled by the largest and earliest swarms. We are frequently asked if swarms from small old-fashioned hives will fill 16-inch and 18-inch hives the first season. Such hives may be filled by the first swarms from small hives. If the weather be unfavourable after the bees are hived, a few pounds of sugar will help the bees very much, by enabling them to build combs for the eggs, which are so abundantly produced by their queens. We have given an order to our hive-maker to send ten hives 18 inches wide and 16 inches deep, and ten 16 inches wide and deep. These will be peopled by early swarms, and smaller hives by later swarms. First swarms in May, even from small hives, will, in seasons ordinarily favourable for honey-gathering, fill large hives.

Many young apiarians, anxious to have their bees in large hives, ask if they should put two or three swarms together in one large hive. It is not necessary to unite first swarms, and it is not good policy to do so. Sixteen-inch hives may be easily filled by small first swarms hived separately, and these will make excellent stocks. In good seasons and localities such swarms will fill 18-inch hives. The second swarms and turn-outs of small hives may be united with advantage, and put into larger hives.

Supering, on the non-swarming system of management, generally begins about the first week in May. Indeed, it should be

resorted to shortly after the bees of full hives cover their combs. Supering, before swarming, is somewhat unnatural and artificial, and in attempting it early in the season it is well to remember the words of the Scottish poet:—

"The best laid schemes of mice and men
Gang aft agee."

But still swarming is often prevented by the use of supers of considerable size. If bees readily enter and commence to work in large supers, they frequently fill them, appearing to abandon the idea of swarming till this is done. In large supers there is room for the bees, which multiply so fast at this season of the year.

"If bees swarm when their supers are half filled what should be done?" It is difficult to answer this question. If the swarm were cast back on the old hive it would probably swarm again either the next day or the first opportunity. If the bees were thrown back without their queen they would not swarm again till the young queens were hatched. Piping and swarming may take place after the birth of young queens, but by throwing back a swarm with an unfertilised queen on the front of the mother hive, swarming would be prevented for some weeks—a month at least. To pursue such a course is neither wise nor profitable; it is here mentioned for the sake of those who may wish to appear in good form as competitors at our honey shows. If our bees were to swarm before their supers were filled we should hive them and remove the supers. Such supers could be placed on other hives, or even on the hives of the swarms as soon as they were filled with combs. If the honeycomb in supers be simply for home use, and not for exhibition, it will be unnecessary to place half-filled supers on other hives.

In supering, the bee-master's aim should be to give his bees room enough in his supers to hold all the additions to the population, and aid them to work heartily in filling them. By using plenty of guide comb—chiefly virgin drone comb—we have seldom found any difficulty in this work. It is very desirable to induce the bees to build combs in supers from their tops downwards. By placing a sheet of paper (with a hole cut to correspond with the hole in the crown of the hive) between the hive and super, the bees do not attach the combs to the hive or even to the paper, thus making the removal of the super a very easy matter. For wood and straw supers, as well as for glass supers, we use, and advise others to use, ladders of wood from the crowns of hives to the tops of supers.

In these days of progress and exhibitions we anticipate some changes in our schedules of prizes. The clamour at present is to bring this and that kind of hive into notice. The common sense and growing intelligence of apiarians will settle this clamour. Swarms of supers will cover our exhibition tables for a season or two, and be much admired, as they ought to be. By-and-by I anticipate that great results in honey and honeycomb, like Mr. Hunter's big bunches of grapes, will carry the day; and for dexterity and ornamental work we shall probably have prizes offered for designs and pictures in honeycomb. Some eighteen months ago the readers of this Journal were told that it was thought possible to cause bees to write "God save the Queen" with honeycomb in a super. If this season be favourable for honey-gathering we shall try to have this inscription in comb over the Manchester Exhibition of Honey next autumn.—A. Pettigrew.

California Honey.—Among the other numerous products for which California seems destined to become famous, honey ranks as by no means the least valuable item. It has already found its way into the eastern markets, though so far in limited supply, and is much admired for its purity and delicacy of flavour. Its production is not limited to any part of the State, but at present it is chiefly made a speciality in San Diego county, near the Mexican border. The honey crop of that county for 1873 was 119,000 lbs., and it is expected it will this year equal 200,000 lbs. The bulk of the honey finds a market in the East. Several car loads were shipped from San Diego East last year, and found a paying and appreciative market, and much more will be shipped this year. The honey made in San Diego is exceedingly white and handsome, and of fine flavour, and commands a good price and ready market wherever offered. Little or no strained honey can be sold during the prevalence of the green fruit season, and it will not be until next fall that any great amount can be moved. The total crop in California this year is variously estimated at from 600,000 to 700,000 pounds.—(*Economist.*)

OUR LETTER BOX.

Fowls Feather-eaters (*E. Smith*).—It arises from the lack of something they would get if they were at liberty, and the feather is the nearest approach to that for which they have the natural craving. Spanish are very prone to it. We have never been able to cure it entirely, but we have lessened it by supplying them with fresh horse dung, lumps of growing grass, with plenty of fresh earthworms and lettuces.

Caponising (*A. G.*).—We never allow it to be practised; and cannot publish directions for one of the most cruel of operations. A well-fed pullet is superior for table to any capon of the same variety.

Various (*Amateur*).—If you wish us to reply the same week, you must send your queries earlier. May-hatched pullets should lay in November or December. Feed them on ground oats or barley meal. Keep eggs where they will be neither heated nor chilled. If you wish to keep them through the winter, you must put them up fresh, and cover them in slaked lime. If for sitting, you may keep them three weeks or a month, but recollect the fresher the eggs when put under the hen the stronger the chickens. In most cases a hen baulked from sitting lays again in from six to eight weeks if during the laying season. To prevent fowls flying the flight feathers may be tied together, or the wing fastened in a brace.

Artificial Swarming (*F. J.*).—We do not advise you to swarm your bees by putting an Italian queen into an empty hive, and placing it on the stand of the old hive with a view to gather-up outside workers, and thus form an artificial swarm. Neither queen nor bees would be disposed to remain in their new habitation if treated in this manner. If the old hive be placed near the old stand most of the bees would find the way to and remain in it. Better and safer it will be for you to drive a swarm into an empty hive, and place the mother hive and swarm some feet or yards to the right and left of the old stand, and if you wish to introduce an Italian queen into your apiary, it could be easily done by giving it to the old hive twenty-four hours after it has swarmed. By that time the bees of the old hive would be found searching for their lost queen, and willing to accept another properly introduced to them. Driving is the most easy, natural, and efficient mode of artificial swarming. In fine weather a swarm may be driven into an empty hive in four minutes.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. April and May	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg	deg.		deg.	deg	deg.	deg.	deg.	In.
We. 28	30 152	58 1	53.0	W.	48.8	7 .6	45 0	116.4	41.5	—
Th. 29	30 163	58.3	50.6	W.	50.8	66.5	43.7	118.8	40 9	—
Fri. 30	30.090	60.0	52 8	N.W.	51.2	70 0	42 8	108.6	39 0	0.066
Sat. 1	29.938	49.0	48 2	E.N.E.	52.1	56.8	47.7	61.7	42.8	0.262
Sun. 2	29 951	51.8	48.8	N.W.	50 9	61.3	47.9	101.2	47.6	—
Mo. 3	29 956	58 2	51.2	S.W.	50 8	69.5	41 0	120 6	39.3	—
Tu. 4	30 014	58 7	53 0	N.E.	51.5	66.4	44 1	97.9	40.2	—
Means	30.038	56 3	51.1		50.8	65.9	44.9	103.6	41.6	0.318

REMARKS.

28th.—A most beautiful day throughout, very bright and warm. [wards.

29th.—Rather dull early, but soon cleared off; cloudy at noon, but fine after-

30th.—A warm fine day, rather cloudy about 6 P.M.; but fine evening, and bright starlit night.

May 1st.—Cloudy at 2 A.M.; sharp short shower at 5 A.M., and slight rain more or less all day; very thick and dark about 3 P.M.; a dull damp day.

2nd.—Fine morning, but not very bright till after noon; hazy at night.

3rd.—Beautifully fine all day and all night.

4th.—Very fine early, but cloudy by 9 A.M., rather stormlike soon after, and once or twice during the afternoon, the sun shining but little.

A very bright pleasant week, with the exception of May-day, which, for darkness and discomfort might have been November. The mean temperature at 9 A.M. about 8° higher than last week; the underground temperature also rose from 46.1° to 50.8°.—G. J. Symons.

COVENT GARDEN MARKET.—May 5.

The supplies have much improved and business rather better, good hothouse produce being more inquired after as the season advances. Very heavy consignments of Asparagus and salading from the Continent have arrived during the last few days. St. Michael Pines are getting less plentiful.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	2	6	to 3	6	Mulberries lb.	0	0	to 0	0
Apricots dozen	0	0	0	0	Nectarines dozen	0	0	0	0
Cherries lb.	0	0	0	0	Oranges ℔ 100	5	0	14	0
Chestnuts bushel	10	0	20	0	Peaches dozen	15	0	24	0
Currants ½ sieve	0	0	0	0	Pears, kitchen dozen	2	0	3	0
Black do.	0	0	0	0	dessert dozen	8	0	12	0
Figs dozen	8	0	12	0	Pine Apples lb.	4	0	8	0
Filberts lb.	0	0	0	0	Plums ½ sieve	0	0	0	0
Cobs lb.	0	0	2	0	Quinces dozen	0	0	0	0
Gooseberries quart	1	6	2	0	Raspberries lb.	0	0	0	0
Grapes, hothouse lb.	8	0	15	0	Strawberries lb.	6	0	15	0
Lemons ℔ 100	8	0	12	0	Walnuts bushel	8	0	12	0
Melons each	0	0	0	0	ditto ℔ 100	1	0	1	6

VEGETABLES.

	s	d.	s.	d.		s.	d.	s.	d.
Artichokes dozen	3	0	to 6	0	Leeks bunch	0	4	to 0	0
Asparagus ℔ 100	3	0	6	0	Lettuce dozen	1	0	2	0
French bundle	2	0	10	0	Mushrooms pottle	0	9	2	0
Beans, Kidney ℔ 100	2	0	0	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	0	0	0	0	Onions bushel	4	0	8	0
Beet, Red dozen	1	0	3	0	pickling quart	0	6	0	0
Broccoli bundle	0	9	1	6	Parsley doz. bunches	6	0	8	0
Brussels Sprouts ½ sieve	0	0	0	0	Parsnips do.	0	9	1	0
Cabbage dozen	2	0	3	0	Peas quart	4	0	7	0
Carrots bunch	0	6	0	8	Potatoes bushel	2	6	5	0
Capsicums ℔ 100	0	0	0	0	Kidney do.	8	0	5	0
Cauliflower dozen	4	0	8	0	Radishes doz. bunches	1	0	1	6
Celery bundle	1	6	2	0	Rhubarb bundle	0	4	0	9
Coleworts doz. bunches	4	0	6	0	Salsafy bundle	1	6	0	0
Cucumbers each	0	3	2	0	Scorzonera bundle	1	0	0	0
pickling dozen	0	0	0	0	Seakale basket	2	0	0	0
Endive dozen	2	0	0	0	Shallots lb.	0	3	0	4
Fennel bunch	0	2	0	0	Spinach bushel	0	0	4	0
Garlic lb.	0	6	0	0	Tomatoes dozen	0	0	0	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish bundle	0	0	4	0	Vegetable Marrows doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	MAY 13—19, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m. h.	Sun Sets. m. h.	Moon Rises. m. h.	Moon Sets. m. h.	Moon's Age.	Clock after Sun. m. s.	Day of Year.
13	Th	Royal Society at 8.30 P.M.	66.9	43.4	55.2	13 af 4	39 af 7	after.	10 2	8	3 53	133
14	F	Literary and Artistic at 7 P.M. Manchester National [Horticultural Exhibition.	63.2	40.3	51.7	11 4	40 7	28 1	23 2	9	3 54	134
15	S		64.8	40.7	52.7	10 4	42 7	40 2	33 2	10	3 53	135
16	Sun	Whit-Sunday.	66 0	46 3	54.1	9 4	44 7	51 3	43 2	11	3 53	136
17	M	Whit-Monday. Bank Holiday.	65.7	41.0	53.4	7 4	45 7	2 5	53 2	12	3 51	137
18	Tu	Zoological Society at 3.30 P.M.	66.2	42.2	54.2	6 4	47 7	15 6	4 3	13	3 50	138
19	W	Society of Arts at 8 P.M.	67.0	42.7	54.9	4 4	48 7	28 7	17 3	14	3 47	139

From observations taken near London during forty-three years, the average day temperature of the week is 65.7°; and its night temperature 43.2°.

CONIFERS IN EXPOSED SITUATIONS.—No. 1.

SITES of residences for the wealthy are occasionally selected having no natural shelter from the winds. Hill-side sites will naturally have shelter from the opposite point of the compass to its aspect, and it may be the prospect is south; the hill will then be a natural shelter from the cold piercing north. But shelter from the nipping east or stormy west is also required. Level or gently undulating surfaces in a flat country are easily sheltered by raising at a suitable distance hills of verdure; for trees, like hills, break the force or divert the course of currents of air. Many trees will be suitable for shelter in a flat country which in a high one are altogether unsuitable. Trees which in valleys attain their full proportions, become in exposed sites stunted in growth. I shall confine my remarks to those Conifers that I have had experience of in a high and exposed situation. Shelter is sought by plantations and belts of trees near and distant, and the first subject to claim our attention is the

Scotch Fir (Pinus sylvestris). It rears its head in stately form, and its roots grip the soil firmly, enabling it to hold its own against wind and weather in positions from which all, so far as I know, of its own order are driven. Stunted it will be if thinly planted, or at a high altitude, for trees diminish in size with altitude and cold, and increase with warmth; but though its head may be a scrub, the branches driven this way and that, the tree does not fail to maintain its equilibrium, and is unquestionably the fittest Conifer for a hill.

Austrian Pine (Pinus austriaca) is of denser growth, and considerably more branched and spreading than the Scotch Fir, the latter making an effort to produce a timber-like stem, to which the Austrian Pine has no pretensions, nor, in my opinion, will this ever be valuable in the most favourable positions as a timber tree in this country. Its growth is dense, and the grip of the soil not nearly so great as in the Scotch Fir. In sheltered positions it grows quickly, forming a spreading tree with dark foliage, and is very handsome. It is also good for planting in the vicinity of towns.

Corsican Pine (Pinus Laricio) is not nearly so dense in habit as the Austrian Pine, and is even less bushy than the Scotch Fir, but it grows twice as rapidly in an exposed situation as either of the kinds mentioned. It rises in the most exposed sites with its main stem as erect as a flagstaff, having every appearance of making a valuable timber tree. In sheltered positions it grows very rapidly, making growths of about a yard in a season. It has a still greater advantage, for though hares and rabbits are very fond of Scotch Fir, and browse on the leaves of the Austrian Pine, these animals never touch the Corsican Pine, which is the very best for any situation for shelter, and I am sanguine also as a timber tree.

We may add to these the Mountain Pine (Pinus Pumilio montana), which is dwarf, and will move any and almost every way without snapping. I do not, however, recommend it. The Sea Pine or Pinaster (Pinus maritima, *Lamarck*) may be mentioned as useful for planting near the sea and for sandy soils; it and the Austrian Pine withstanding the sea winds better than any other Conifer. There is no disputing the value of shelter, especially in exposed situations, so that no apology is needed for introducing a plan of a sheltering belt or plantation.

a d a d a d a d a d a
d d d d d d d d d d
d c d c d c d c d c d
d d d d d d d d d d
b d b d b d b d b d b
d d d d d d d d d d
d b d b d b d b d b d

a.—Austrian Pine at 9 feet apart.
b.—Corsican Pine at 9 feet apart.
c.—Scotch Fir at 9 feet apart.
d.—Larch in the between rows 4½ feet apart, and where planted alternately 9 feet.

The Larches, as nurses, to be all felled by the time they are encroaching upon the evergreens. The removal of the Larches will leave the evergreens 9 feet apart every way, and when these meet, and before they crowd so as to become bare at the bottom, thin to 18 feet apart, and this will keep them feathered to the ground or nearly so, and good for shelter to the longest period. The Larch in exposed situations becomes a scrub, and would never attain to the size of a timber tree were it not for the shelter afforded by the other trees forming the plantation. The pale green of the Larch in spring adds immensely to the beauty of such a belt. The belt ought to be of such a breadth that at least six rows of trees will remain after the nurses are removed.

White American Spruce (Abies alba) has glaucous leaves, and in rather moist soil with moderate shelter grows quickly, and forms a very handsome conical tree. It does not do well without shelter, becoming stunted and sparse of branchlets, succumbing to wind in a bleak exposure.

Hemlock Spruce (Abies canadensis) in exposed situations grows very slowly, the leaves being browned and the appearance miserable. With shelter and in damp soil it thrives well and is very handsome, but it is not nearly so quick-growing nor so beautiful as Prince Albert's Spruce (Abies Albertiana); this, however, does not succeed in exposed positions.

Douglas Fir (Abies Douglasii), handsome and rapid-growing as it is in sheltered situations, does not succeed in high bleak places, its leaves in winter becoming brown and falling in most part before the new leaves are formed, and the tree ultimately perishes.

Menzies' Fir (Abies Menziesii) is quick-growing and ornamental, slightly browned on the most exposed side. The leaves are silvery beneath; it does best in rather damp soil.

Norway Spruce (Abies excelsa) is very dense in growth, and grows very slowly, having after a hard winter a sickly appearance; is not to be recommended unless shelter is present and the ground damp. With those aids it is quick-growing and beautiful.

"Monkey Puzzle" (Araucaria imbricata) does well, the tree retaining its branches near the ground, growing less freely than in sheltered positions, but is better furnished.

Deodar (Cedrus Deodara) is, in an exposed place, cut by the winds, losing its leaves in spring, especially after a severe winter. A number of young plants from seed had from Florence are growing freely, and may be more hardy.

Mount Atlas Cedar (Cedrus atlantica) becomes a spreading tree, the exposure causing it to grow laterally, and yet it is very handsome, very much quicker growing than C. Libani, which does not succeed, becoming a scrub. In moderately sheltered positions C. atlantica grows quickly, and for growth compares favourably with the Corsican and Austrian Pines.

Graceful Cryptomeria (C. elegans), very handsome; its aspect being unique from the chocolate tint of its leaves and branchlets. Winds tell adversely upon it, though in moderately sheltered positions it does fairly. It is said to do well near the coast. C. japonica, by a cold exposure, becomes browned and dwindles away.

Lawson's Cypress (Cupressus Lawsoniana) is slightly browned on the wind side, and especially seawards (east) in the most exposed positions becomes a spreading bush. With moderate shelter it grows freely and is very beautiful. Its varieties are equally hardy and desirable. C. stricta is hardier than C. Lawsoniana, and very much darker in foliage. C. Lambertiana, or macrocarpa, has disappeared.

Chinese Juniper (Juniperus chinensis) grows slowly, but is not cut by the land (west) or sea (east) breezes, and is very ornamental. The common Juniper (J. communis), Irish (J. hibernica), Swedish (J. suecica), have the young growths cut in winter, especially the latter, yet with a moderate shelter they do fairly.

Red Cedar (J. virginiana) grows moderately and forms a fine columnar head, having dark-green foliage. A very distinct and hardy form of Red Cedar is Juniperus virginiana Schottii; it is of fine pyramidal growth, with foliage of a much lighter green than the species.—G. Abbey.

THE ORCHARD HOUSE.

It seems but a few years since orchard houses were in their infancy—when those who undertook to rear these promising bantlings were invited to register facts and to chronicle experiences. I suppose that this pleasing method of fruit culture is now thoroughly understood, and that the art has already arrived at the dignity of a science. The fact has been established that a correct mode of culture commands success; the converse of which proposition is also true—the mode of culture which ends in failure must be the reverse of correct.

Now, I am often asked, Is it worth while to invest in an orchard house? and to this I reply—If you intend to take pains in the application of the rules laid down in the best manuals, and think you have the patience to bear some disappointments, the perseverance to conquer some difficulties, and the spare time to devote to your new pastime, Yes, and I can promise you much pleasure and abundant fruit; but if you are inclined to think that all is done when you have signed your cheque—if you have no intention of personally attending to your trees, but of allowing them to take their chance, as too many amateurs do, why then No. In your case I give the same advice as Mr. Punch did to those about to marry—"Don't." Your trees will be a short-lived luxury to thrips, aphides, red spider, and scale, but to yourself no good at all.

People congratulate me upon my success, but I can tell them it is the result of no small painstaking on my part. I will not say trouble, because the toil is mingled with so much pleasure.

My chief object in writing this letter is to impress upon your less-experienced readers that success in orchard-house culture depends very much upon the promptitude with which the first aphidian incursions are met. The most frequent cause of failure is an apathetic toleration of these pestilent insects in the sweet springtide. Do not helplessly look at them, but take instant measures for their extinction. You must war with them *ab ovo*, or you will never advance *usque ad mala*. Am I extreme in saying that every single tree would perish as a matter of course unless steps be taken for the repression of aphides? No. This should be the first consideration immediately the fly shows itself on the young and tender foliage.

When once the leaves are curled you may know that you are having the worst of the battle. You can then hardly reach the inrolled blighting pest. Before, you might have washed off the embryo brood from every infected leaf with an old shaving brush dipped in pure water. I prefer pure water to boiled quassia chips and soft soap and tobacco water, which if too strong will destroy the aphis, leaf, and all; and then is not the remedy co-extensive with the disease? Yes.

> "To heal disease all tortures are endured,
> A pig is killed that bacon may be cured."

Having neglected pure water (which, by-the-by, must not be applied during sunshine), then nothing will serve your turn but instant and thorough fumigation. Your former dilatoriness has entailed upon you this necessary expense. I, for my part, make up my mind for an annual outlay of one guinea in purchasing Mr. Appleby's compound tobacco paper, which I do not grudge so much as the money I am forced to pay for the terrible and increasing demands of local taxation. I must confess that I have never had such a hard battle to fight with these persistent insects as during the late cold season.

I have no antipathy to the insect as an insect. It must be, I should think, rather a pet with the entomologist. The ant, as Mr. Darwin tells us, extracts a limpid drop of sweetness from its excretions. Its reproductive powers are marvellous, but inasmuch as it is death to my fruit trees I give it no quarter. Nothing but its utter extermination satisfies my repugnance to it.

I feel I must not add to the length of this letter. I will only say that the setting of the bloom on my Peach, Nectarine, and Apricot trees has been eminently satisfactory this year. I enclose a specimen from a cordon tree which, sloping at an angle of 45° on a wall 12 feet high, has been "a thing of beauty," and on it from top to bottom literally every bloom has set; while another tree equally flourishing, grown on the same soil and tended with the same care, has hardly one set blossom on it. Does the reader ask, Why this discrepancy? I answer, For the same reason that there are anomalous nouns and verbs in every grammar.

I must not omit that the emptiness of my tanks shows that the rainfall during the last winter has been inconsiderable in this part of Herts. A second season of drought will, I fear, be very prejudicial to the crops.—A Constant Reader.

[The Peach branchlet enclosed was 5 inches long, and on it were nine well-set Peaches.—Eds.]

AURICULA SHOWING.

The Metropolitan Floral Society deserves credit for endeavouring to restore a correct system of judging, for of late years quantity rather than quality has been considered, and plants with two or three trusses of bloom have had more weight with the Judges than any adherence to properties; but on looking through those staged at the Royal Botanic Society's Show on Wednesday last I noticed that by far the larger number of plants had their flower stems supported by sticks. Now, amongst the older Auricula growers this was never tolerated. It was considered that one point in a plant was that it had a stem sufficiently stout to support the truss, and no artificial support was needed or allowed; and I think the Society would do a good work if it prohibited at its next exhibition anything of the kind.—An Old Fancier.

WINDOW GARDENING.

The management of plants is, I fear, but little understood by those who strive to cultivate a few homely flowers, and whose only garden is the window-ledge, and I am induced to offer the following suggestions in the hope that they may prove of some value to readers of humble horticultural pretensions, and assist them to preserve their plants in a healthy state.

The leaves of plants perform most important functions—viz., the exposure of the fluids to the influence of air and light, and the absorption of carbonic acid and moisture from the air by means of pores on their surface. It is most important, therefore, that they should be kept free from dust, which by closing the pores interrupts their functions and injures the health of the plant. I frequently observe the plants in window gardens encrusted with dirt and presenting a most sickly appearance, doubtlessly attributed by the owner to any cause but the right one.

The best method of cleansing plants is by syringing, or in the case of plants with smooth leaves by sponging. After syringing overhead the plant should be inverted to clean the under side of the leaves. By attending to the foregoing rule

I am enabled to preserve a healthy collection of plants in a locality where smoke and dust are plentiful.

It is a common custom to colour the pots in window gardens with red lead or other pigments in order to give them a bright and neat appearance, but this practice is especially detrimental to the health of the plants, the pores of the pots being closed and the evaporation stopped. If the pots stand in saucers care should be taken to allow no water to remain in them, as it would soon injure the roots by stopping the drainage. The best pots are those which are slightly under-burnt, and consequently soft and porous.

The soil in town gardens is generally unfit for potting purposes, having a tendency to set hard if allowed to become dry, and by contracting to crush and tear the tender rootlets of the plant growing in it. I would, therefore, strongly recommend readers to purchase their potting soil from the nearest nurserymen, who will supply them with the proper mixture at a trifling charge.

In conclusion I would warn all amateur gardeners against purchasing plants in bloom from hawkers in the streets; such plants are generally forced into bloom, are sold at a high price, and last but a very brief period, whereas strong healthy plants of Geraniums, Calceolarias, &c., can be purchased in the market, or from nurserymen, for 2*s.* 6*d.* per dozen, and after being repotted will come into bloom and last the whole season.—Edwd. Geo. Rivers.

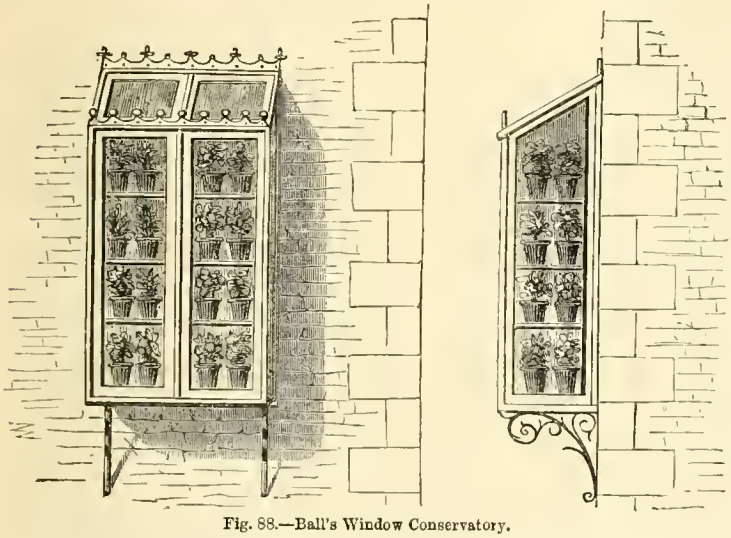


Fig. 88.—Ball's Window Conservatory.

[To avoid exposing plants to the destruction of a gas-heated room we commend to the attention of our readers "a window conservatory." This is a contrivance of Mr. F. W. Ball's, contractor, Sussex Street, Norwich. It can be made of any size, and is easily fixed to the outside of a window-frame. The comfort of the room is increased in winter by its shutting-out the cold, and is cooling in summer, a continual current of air being kept-up outside the window by the ventilation of the conservatory.—Eds.]

LATE-KEEPING GRAPES.

If twenty Grape-growers, taken at random, were asked to name the best late-keeping black Grape, it is very probable that nineteen of them would select Lady Downe's Seedling, but it is questionable if all of them could give a satisfactory reason for doing so. I have been much puzzled to account for the popularity of this Grape, and have come to the conclusion that it is simply owing to its being better known than some other kinds, one or two of which are, in my opinion, very superior to it. Let us look at its merits, and then try the effect of comparison with others. It is vigorous in growth, with stem, branches, and foliage large and of great substance. It starts into growth freely and well, is very prolific; the berries set freely, are large, colour well, continuing plump and in excellent condition till spring. So many points of excellence ought, of course, to receive the attention which they merit, and they have undoubtedly done so; but then, on the other hand, the bunches, though so numerous, are neither large nor handsome; they are long and slender, with very slight shoulders. I ought not, perhaps, to say this is invariably the case, for I once had a bunch with really fine shoulders, but I have never had or seen another, and slender bunches are certainly the correct type. It is not, however, from the size of the bunches that I would condemn this Grape, but for its tendency to suffer from the scalding of the green berries, and which is only to be cured, or rather checked, by letting in fresh air freely and constantly for a week or more, and consequently reducing the temperature. This treatment is all very well if there are no other sorts of Grapes in the same house, but in mixed vineries it is very objectionable, especially if there are any Gros Guillaume or Muscats, all of which are so liable to suffer serious harm by being thus suddenly subjected to a sustained low temperature when the fruit is swelling.

In a late vinery I have Lady Downe's Seedling, Black Alicante, or Black Tokay as it is sometimes called; Gros Guillaume, Mrs. Pince's Muscat, Madresfield Court Muscat, and Frankenthal, all planted inside, but with the roots passing under arches in the front wall into an outer border. The Vines are in excellent condition, and have been in full bearing for two years, so that the estimate which I have made of their relative merits will prove a safe guide for future measures.

The sort which, in my opinion, bears the palm as the best late-keeping Grape for the general practitioner is Black Alicante; it is equal to Lady Downe's Seedling in the vigour of its growth, while the size of its fruit is altogether superior to that variety in its large heavily-shouldered bunches, and its perfect immunity from scald or shanking. The bunches are invariably too numerous, a considerable number always having to be taken off, and every berry appears to set and swell. I am inclined to think that this fine Grape would long ago have taken the place of Lady Downe's if its value was better known. That is the point. The true kind is not well known, and there is no doubt that Black Morocco or Kempsey Alicante has crept into many vineries under the title of Black Alicante, only to disappoint those who, supposing it to be the real Simon Pure, conclude that they have been misled by a fanciful and untruthful description, and discard it in disgust; for although Black Morocco is a fine-looking Grape and hangs well, there can be no greater contrast than in the setting properties of the two kinds, the true Black Alicante setting its fruit most freely, while it is a very difficult matter to induce the other variety to set at all. The whole of the Vines under my care were had from Mr. Pearson of the Chilwell Nurseries, near Nottingham, and being certain that I have the true Black Alicante, I append Mr. Pearson's description of it in his valuable little book on Vine culture:—"Black Alicante. A noble variety when well grown. As several inferior Grapes are grown under this name, I will describe the true sort: A vigorous grower, with large downy foliage. Bunches large, heavily shouldered like the Black Hamburgh. The footstalks of the berries very strong and thick. Berries very large and black, covered with a fine bloom. Skin thick. Requires almost as much heat as a Muscat of Alexandria, and is then a first-rate Grape and one of the best keepers."

I would call especial attention to what Mr. Pearson says about heat, because it is owing to a deficiency in this respect that late Grapes so often lack flavour and keep so badly. Take for example that noble Grape Gros Guillaume. In the temperature of a Muscat house its large handsome foliage borne on wonderfully vigorous wood that is laden with magnificent bunches, often measuring 18 inches in length and 15 inches across the shoulders, the berries very large, of a deep black colour, and of a singularly piquant rich flavour, mark it for a king among the late Grapes. Without the advantage of the high temperature its fruit is comparatively worthless—nay more, there is often no fruit at all. A comparison of the two methods of treatment will serve to explain this.

By the first the application of artificial heat follows the first signs of growths, but does not precede it, and a steadily increasing temperature is maintained till the bunches are in

bloom, by which time the maximum of 75° by night and 85° by day is reached. After the fruit is set it is reduced to 70°, and kept there till the fruit is well coloured and the bark of the wood of a bright reddish brown hue, after which the valve is only turned on to dispel damp or keep out frost. Thus a double purpose is accomplished: the crop is in a finished condition, and will continue fit for table till spring, and well-ripened fertile wood is secured for the ensuing season.

By the second method there is no systematic application of artificial heat, or rather the heating apparatus is not used at all till late in autumn, from an erroneous impression that the growth of late Grapes should be retarded as much as possible. The result is badly-coloured fruit of a poor insipid flavour, discreditable to the grower, and certainly distasteful and unsatisfactory to the consumer; soft, pithy, unripened wood, pointing to barrenness and failure in the next season.

This is not a fanciful picture. How frequently have we been told that Gros Guillaume is worthless—a shy-fruiting sort, occasionally bearing large bunches of unsightly flavourless fruit. And how pleasant is the feeling—nay, it is a veritable triumph, when the excellence of really well-grown fruit becomes fully realised. Certainly erroneous impressions are very prevalent concerning this Grape; one of them is that it must be grafted in order to induce fruitfulness. Even Mr. Pearson asserts that it "is improved by grafting on the Hamburgh," and I have been gravely informed by others that it is impossible to obtain full crops from ungrafted Vines.

Now, a mere glance at it when in full growth ought to convince anyone that grafting would be an evil even if it were necessary. The large bulk of the stem and canes, the stout, vigorous, long-jointed branches, with foliage and fruit bunches of an unusual size, are all admirably proportioned, and yet we are told that it is necessary to check this vigour, to upset this balance of Nature, by grafting it upon a sort that is not naturally so vigorous. One would think that the fallacy of such reasoning would strike the dullest intellect. Oh for an entire house of Gros Guillaume upon its own roots, which could ramble unchecked and free in a wide border of sound rich soil. What a sight would it present when in full bearing! The wide-spreading branches clothed with broad foliage, and bearing huge bunches of deep purple-skinned fruit. What breadth of shoulder, and yet how symmetrical! But I must not go farther, the picture would be too tantalising; it is, however, none the less certain that it could be fully realised, for if one or two Vines can be made to produce full crops of fine fruit year after year in a mixed vinery, it follows that the culture of an entire house of it would be still easier.

One other matter must not be forgotten, and that is not only to ripen the wood thoroughly, but to retain two or three joints of it on every lateral spur, pruning to a full plump bud. Here Nature again clearly points the way. She gives us a plant of extraordinary vigour, and if we try to confine its growth or to reduce it within the bounds wisely assigned to others of weaker growth, we ought not to feel surprised if such faulty treatment leads to failure.—Edward Luckhurst.

THE COLOGNE INTERNATIONAL EXHIBITION.

The General Committee of this Exhibition wrote as follows:

"To the Royal Horticultural Society of England.

"Gentlemen,—A letter from Lord Odo Russell, the British Ambassador at Berlin, informs us of your having courteously intimated that the Council of your esteemed Society would be ready to act as a Committee on behalf of British exhibitors at our forthcoming International Exhibition, and that it would also send a representative to the same.

"We now take the liberty to address you direct on this subject, and before all we beg to state that we shall be very happy to accept your kind offer, by which you will be putting us under great obligations, and that we shall thank you to inform us of the names of those gentlemen who will kindly take the matter in hand, so that we may insert them in the catalogue to be issued, as forming the English Special Committee, in the same manner as we shall publish the committees formed in other foreign countries.

"We are sending you by book-post general programmes as well as the special regulations of our Exhibition. If you should require any more of these they will with pleasure be at your service.

"We do not at the same time send you application-forms for entries, because we should first like to hear from you whether you will undertake to attend to this matter, or direct to us any exhibitors applying for the same, which we suppose would be more convenient to you.

"In our opinion it is especially desirable to see the English manufacturers of objects relating to garden architecture, machinery, &c. (divisions III., IV., and V. of our programme) entering competition, and we beg you will kindly draw also their attention to our undertaking. Further there are fossil plants and their fruit stands (see special programme VI. *c*), of which we should be highly pleased to get a collection sent from your country. These latter are no doubt abundantly found in the coal and turf pits of Wales, &c., and perhaps there are collections of this kind in the royal museums, which Government might be induced to send to our Exhibition.

"Our undertaking which already thus far promises to take very large dimensions, has found ready subvention on the part of the different Governments as well as from the public in general. Most of the railway and steam navigation companies have reduced the freight on goods to be sent to the Exhibition by 50 per cent., and there is no duty to be charged on such objects unless they should be sold here and remain in the country.

"For English exhibitors it will be of special interest that the Netherlands Steam Navigation Company and the Belgian Company whose steamers ply respectively between London and Rotterdam, and Dover and Ostend, as well as the Rhenish Railway Company are of those who have granted the before-mentioned reduction.—B. Edward Oppenheim, *Sec.*"

Responding to this application, the Royal Horticultural Society have appointed a Committee, consisting of W. Burnley Hume, Esq., W. B. Kellock, Esq., Robert Warner, Esq., and Dr. Hogg.

ROYAL HORTICULTURAL SOCIETY.

May 12th.

The third Exhibition of the season was favoured with a brilliant day. It is designated the Pot Rose Show, and as such we dispose of it by saying that Mr. J. Herrington, gardener, Larkbere, Thornton Road, Clapham Park, staged six plants and a box of twelve cut blooms, for which he had first prizes. That completes the Roses for five classes; but, as an extra, Mr. W. Paul sent a collection of cut blooms, which were much admired. But still there was a flower show, for the collections of hardy plants were a show in themselves—small it may be, but yet not only interesting, but intrinsically beautiful.

For eighteen hardy perennials in pots were staged three good collections. Than these fine plants nothing in the Exhibition was more effective. Even a conservatory half filled with such plants would be a grand sight; but their chief merit is that they are adaptable to any garden, and their extended cultivation cannot be too strongly recommended.

The most telling pots in the collection of Messrs. W. Rollisson and Sons, Tooting, who were placed first, were Trillium grandiflorum, paper white, very fine; Phlox Nelsonii, a dense low mass of scented pinkish white flowers; Gentiana acaulis, exceedingly rich violet purple; Primula cortusoides amœna, splendid, and A. lilacina; Gentiana verna, dwarf, rich blue; Iberis corifolia, Polygonatum multiflorum (Solomon's Seal), with Iberises Iberica, most beautiful, and Lady Jane, a large plant of Dielytra spectabilis, and Saxifraga siberica. Second honours were awarded to Mr. R. Parker, Tooting, who had a charming group; the best were Phlox setacea violacea, P. frondosa, and P. divaricata, Gentiana acaulis, Anemone nemorosa flore-pleno, Euphorbia pilosum with golden green bracts, Iris nudicaulis, Orobus vernus and O. albus plenus, Adysetum (Alyssum) orientale, Saxifraga palmata, Primula elatior Golden Plover, Caltha palustris flore-pleno, deep yellow; Scillas, and Dielytra. Mr. R. Dean, Ealing, secured the third prize with, amongst others, Aubrietia Eyreii, an exceedingly fine variety, invaluable for spring bedding; Lithospermum prostratum, Pansy Sulphur Queen, crimson and white Daisies, Cheiranthus hybridus, and C. alpinus; also Pinguicula grandiflora, an insectivorous plant, the flat Auricula-like leaves being covered with dead insects. It has beautiful spurred flowers surmounting a stem 4 inches long; it is purple in colour, and in form not unlike a Mimulus. For nine bunches of hardy perennials, cut blooms, Mr. R. Parker, Tooting, was first with pots of Aponogetum distachyon, Iris germanica, Trollius napellifolius, Spiræas, Alysaum, Tulips, Scillas, &c. The flowers were inserted in sand in 32-sized pots. Second went to Mr. Dear, who had a collection in smaller pots. We have now noticed the most attractive portion of the Exhibition, for these simple hardy flowers have fairly won the place of honour.

In the Azalea classes there was scarcely any competition. The best plants were staged by Mr. J. Herrington, gardener, Larkbere, Thornton Road, Clapham Park, who secured the first prize with well-bloomed medium-sized plants of Sir C. Napier, Criterion, Iveryana, Stella, Duc de Nassau, and Flag of Truce, and had the first prize, second honours going to Mr. Colea, gardener to W. K. Wigram, Esq., St. Margarets, Twickenham. Messrs. Dobson & Sons also exhibited a miscellaneous collection of very good plants, in which Reine des Doubles was the most effective.

For nine Calceolarias (open), Messrs. Dobson & Sons were

first with dwarf massive plants with large well-coloured flowers of good form and of great merit, the varieties were Crown Prince, Unique, Magnificent, Achievement, Hamlet, Canary, Admiration, Enchantress, and Sir R. Napier; Mr. Clark, gardener to W. Shuter, Esq., Hampstead, being second with larger plants and very good; the third prize going to Mr. Herrington, gardener, Thornton Rise, Clapham Park. The class for show Auriculas was empty; for Alpines, Mr. Dean and Messrs. Dobsou & Sons staged small plants, and had first and second prizes respectively.

Mr. S. Coulter, gardener to L. J. Baker, Esq., Haydon Hall, Middlesex, exhibited splendid pyramids of Mignonette 4 feet high and 2½ feet in diameter at the base. The plants were trained on wire trellises, and covered with medium-sized trusses from base to apex. Mr. F. Barnes, gardener to A. Chancellor, Esq., The Retreat, Richmond, staged smaller plants extremely good in foliage, and covered with splendid spikes. These collections were excellent examples of culture, and merited official recognition.

Messrs. James Carter & Co. exhibited fine pyramids of bouquet Mignonette, excellent alike in culture and quality; a basket of the distinct and brightly painted Coleus Duchess of Edinburgh, and variegated Musk. A gay miscellaneous group of decorative plants were also brought from the Society's Gardens.

Fruit Committee.—Henry Webb, Esq., in the chair. Mr. James Batters, gardener to Mrs. Willis Fleming, Chilworth Manor, Romsey, Hants, sent a collection of forced vegetables, which were much discussed, as they were grown in 8-inch pots, and therefore were considered by the Committee to possess great interest to those having small gardens. A cultural commendation was unanimously awarded them. Excellent bundles of Connover's Colossal Asparagus came from Mr. Dancer of Chiswick, and Mr. Allen, gardener to Lord Suffield, Gunton Hall, Norwich.

From Mr. Sidney Ford, gardener to W. E. Hubbard, Esq., came a collection of well-kept Apples, to which a letter of thanks was directed to be sent. A fruit of Sephanotis floribunda came from Mr. Welsh, gardener to B. T. Coombe, Esq., Taunton. A dish of Beurré Rance Pears was sent by Mr. Coles, gardener to W. K. Wigram, Esq., Twickenham. A letter of thanks was awarded on account of their being so well kept. They were also of very good flavour.

A basket of Morels was sent by Mr. Barclay, gardener to the Earl of Rosebery, The Durdous, Epsom. These arrived too late to be placed before the Committee, which is to be regretted, for they were very fine indeed.

Floral Committee.—Dr. Denny in the chair. A first-class certificate was awarded to Mr. Louis Van Houtte, Ghent, Belgium, for Bertolonia Van Houttei; the colour of the leaves is browniah green, the venation being relieved by pinkish steel-blue glossy streaks of metallic lustre. It is a charming plant. A first-class certificate was also awarded to Mr. Wm. Paul for his fine Rose Star of Waltham; it is a noble Rose with great substance of petal, good colour, splendid foliage, and, what is more, delicious perfume. Mr. B. S. Williams sent Azalea Flambeau, a rich crimson scarlet and fine for decorative effect, to which was given a second-class certificate. A botanical certificate was awarded to Mr. Green for Senecio macroglossa, an Ivy-leaved-trailing plant, with large straw-coloured, Daisy-like flowers. Cultural certificates were awarded to Mr. Braid for Pelargonium Duchess of Edinburgh, very dwarf and free; and to Mr. Miles for hybrid dwarf Mignonette, of extraordinary vigour and high perfume. A vote of thanks was given to Messrs. Veitch & Sons for Pinguicula grandiflora, an interesting and also pretty insectivorous plant. Messrs. James Carter & Co. sent Gloxinia Duke of Connaught, a fine seedling, rich and good. Mr. Laing sent Caladium Madame de la Derausage, and Mr. Pounce Lomaria Pounceii.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

Crocus chrysanthus. *Nat. ord.*, Iridaceæ. *Linn.*, Triandria Monogynia.—"Mr. Elwes, F.L.S., gathered it in Asia Minor, probably (he tells me) near Smyrna, in March, 1874. Here it was originally discovered by Friwaldsky, and collected later by Balansa, who observes that it is abundant on hills about 3000 feet high, flowering in March. It has also been found in Macedonia and Thrace by Grisebach. Besides its delicate lemon colour, C. chrysanthus has its sweet odour to recommend it; and it appears to be a very free bloomer."—(*Bot. Mag.*, *t.* 6162.)

Odontoglossum Warscewiczii. *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria. Flowers white, with light purple blotch at the base.—"O. Warscewiczii was discovered by Joseph von Warscewicz, the Polish nobleman who has added so many fine plants to our stoves, in Costa Rica; it was first flowered by Messrs. Veitch in February of this year. It is a very free bloomer, and may, as Dr. Reichenbach suggests, rival O. vexillarium itself in the estimation of florists. Its discoverer describes it as growing at a considerable elevation, and being very scarce."—(*Ibid.*, *t.* 6163.)

Hemichæna fruticosa. *Nat. ord.*, Scrophulariaceæ. *Linn.*, Didynamia Angiospermia. Flowers yellow, with crimson anthers.—"A very handsome rock plant, but not likely to be hardy; found originally by Hartweg in Guatemala, and described by Bentham in 1839 as a new genus, which, however, he immediately after, but on insufficient grounds, merged into Leucocarpus.

"Nothing further was known of Hemichæna till it was sent from Costa Rica by Endress, plants from whom flowered at Messrs. Veitch's establishment, July, 1873. Osbert Salvin, F.R.S., an able ornithologist and assiduous collector of plants, next found it growing on the Volcan de Alitan in Guatemala, at an elevation of 10,000 feet above the sea."—(*Ibid.*, *t.* 6164.)

Galanthus Elwesii. *Nat. ord.*, Amaryllidaceæ. *Linn.*, Hexandria Monogynia. Flowers white.—"A native of the summits of the Yamanlardagh mountains, north of the Gulf of Smyrna, where it was discovered by M. Balansa in 1854, and whence dried specimens were distributed under the name of G. plicatus, being so named by M. J. Gay of Paris. I am indebted to Mr. Elwes, of Miserdine House, Cirencester, a gentleman who to an ardent love of scientific horticulture unites the powers of a traveller, collector, and observing naturalist, for pointing out its distinctive character from G. plicatus, and which Mr. Baker has confirmed. Mr. Elwes collected specimens on the mountains near Smyrna in 1874, and cultivated them in his garden at Miserdine, which bids fair soon to contain perhaps the largest and best private collection of well-named bulbous plants in the kingdom. It flowered in February, and is quite hardy."—(*Ibid.*, *t.* 6166.)

E. G. HENDERSON & SON'S, WELLINGTON NURSERY, ST. JOHN'S WOOD.

Amongst English nurseries this establishment holds high rank and a familiar name. It is not a great nursery in the way of external grandeur, or by a limited number of perfected specimen plants of immense size and great individual value. It is not a nursery that confines its resources to the multiplication of plants to meet the popular demand of the hour. In a word, it is not great for what some other nurseries are justly held in high repute, but it has a greatness of its own of a sober kind, and occupies a distinct niche in the world of commercial horticulture. A glance is only needed to find that the characteristic of the establishment savours of a botanical collection. For variety especially, also for number of plants, the nursery holds the highest position. Not in one, but in every department is it replete with portable plants of sturdy vigour and clean, ready at all times to be distributed by thousands at home and abroad. Orchids, Ferns, Palms, hard and softwooded plants, bulbs, alpines, and herbaceous plants, are all represented in great numbers. It is, in fact, a plant manufactory on a large scale, and reminds the visitor of the Belgian emporiums, where plants are grown for sale rather than for show. The immediate object of our visit was to inspect the grand display of Tulips now flowering in the nursery, but we will first briefly glance through the houses.

The most striking feature is the cool temperature under which Orchids and other stove plants are grown. There is no tender nursing, but the plants are grown in as low a temperature as is consistent with their health, so that at all times they are prepared to endure even long voyages with a minimum amount of injury in transit. Palms, especially the cheaper varieties, are grown by thousands with little or no artificial heat, while large stocks of the choice sorts, such as Cocos Weddelliana and Geonoma gracilis, are flourishing in an intermediate temperature. Orchids are exceedingly numerous in small plants. They are also slowly grown under all the sun and air they will bear, and are in a healthy hardy state. Importations are continually arriving, thousands of plants still unpotted being laid under the stages and on the paths to become freshened after their long journey. A heavy consignment of Odontoglossums, O. Alexandræ, O. Pescatorei, and O. Wallisii were just potted and placed on latticework, over water, with a current of air night and day passing over the plants. Dendrobium Wardianum and Masdevallia Lindeni have also just arrived in large numbers.

In one of the houses is a large flowering plant of Hæmanthus Roperi (syn. Cooperi), its fiery globular heads being very effective. It is very similar to H. insignis. Crinum ornatum

africanum, a variety with several synonymes, is in flower, and surrounded with a large stock of young plants. Cupania filiciforme is freely growing in immense quantities. Ipomœa Horsfalliæ is blooming freely, and is very rich. As an example in the way of Ferns are 1400 Adiantum Farleyense growing without shade or artificial heat. Tabernæmontana camassia is extensively grown. It is a Gardenia-like plant, flowering freely even in thumb pots. For table decoration Dracæna gracilis, an elegant Grass-like variety, is in great repute.

Amongst new plants of notice are a trio of Sonerilas—S. Hendersonii, S. marmorea, and S. argentea. These have large leaves, silvery, and are a great improvement in this class. Bertoloniss are also in the glowing colour indicative of good health. A new plant of great elegance for table decoration is Sonchus elegantissimus. It should be called the Grass Fountain Plant by its delicate arched sprays of bright green exactly resembling a fountain. It is not yet in commerce.

In the herbaceous garden Euphorbia pilosa is a mass of yellow by its golden terminal bracts. It grows about a foot high. The varieties of Primula cortusoides are also in beauty; also Violas, the earliest for bedding being V. pallida, a primrose-coloured variety.

The Tulips, though on the wane, are still a gorgeous sight, as 20,000 bulbs bedded-out must be. The best are Couleur de Cardinal, dwarf, massive, and brilliant; Proserpine, carmine; Rose Luisante, beautiful rose and fine; Brutus, fiery scarlet; Vurbask, ruby crimson; Yellow Prince; Duchess de Parma, crimson and gold; Eleonore and Wouverman, violet purple; Queen Victoria, white; Bride of Haarlem, scarlet flake, dwarf; Crown of Roses, a fine double; Extremite d'Or, like the double Tournesol, and Rex Rubrorum. These are only a few of this splendid collection, and the above is only a mere cursory glance of this well-furnished nursery.

NOVELTIES IN THE ROYAL GARDENS, KEW.

Saxifraga peltata, one of the largest as well as one of the most distinct and interesting of this favourite genus, is now in flower in the herbaceous ground. It is the only species known as having truly peltate leaves, and from this character Engler, in his Monograph, formed for it a distinct section, which he called Peltophyllum. The rhizome is creeping, by the division of which propagation is effected. The leaves are deciduous, and appear soon after the flowers; the petioles are erect, 1 to 2 feet high, supporting an orbicular blade 6 inches or more in diameter, depressed in the centre, six to ten-lobed, toothed and laciniated. The pretty pale pink flowers are produced in capitate cymes 3 to 5 inches in diameter, on scapes which about equal the leaves. Though little can be said in its favour from a purely decorative point of view, it must yet be considered as decidedly essential to the alpine or herbaceous collection. It is a native of California, and was figured in the "Botanical Magazine" of January last year. So far it has proved quite hardy, and is best treated as a sub-aquatic.

Iris olbiensis, also figured in the same volume, is in flower. It is a good ornamental species of dwarf habit, being not more than 6 to 8 inches in height, and with very large flowers in proportion to the plant. They are dark purple, and when extended measure about 4 inches across. It is a native of northern Italy and southern France, and in cultivation is rare.

The Rockwork commences to exhibit in flower many of its choice occupants. Among the foremost in brilliant colour is the rare liliputian Wallflower Erysimum pumilum. It is scarcely 2 inches in height, and is covered with beautiful yellow flowers, much like those of Cheiranthus alpinus. It is fit for the choicest company, and should have a raised position on rockwork. From seed it is easily grown. A native of the Alps and Pyrenees. Near this the choice Omphalodes Luciliæ is commencing to grow. In a suitable position it is not so delicate as usually imagined. Like many others of similar nature it is almost sure to die if planted on the ground level, but when raised a few feet it is comparatively safe.

Dwarf and pretty Alpines are always in demand; of this character are Romanzovia sitchensis and R. unalaschkensis, both of which are in flower, and much resemble Saxifrages. They have white flowers, the former with pale green orbicular-reniform leaves and succulent stems, reaching a height of 6 inches. It is a native of north-west America. R. unalaschkensis is less robust and dwarfer, with reddish stems and leaves of darker green. It is a native of Russian America. They have been but recently introduced, and are little known, but may, however, be recommended with confidence.

The next demanding attention is a new Lewisia, L. brachycalyx. From all that is known of L. rediviva (see page 485 of June 18th last year), another species can but be received with interest and pleasure. It has a similar habit, though apparently more robust, and producing a greater number of flowers. They have a fewer number of petals, are somewhat smaller and paler in colour. The leaves at once distinguish the two, being in this narrowly spathulate instead of terete or compressed. It is a native of the same region as L. rediviva.

A very good tuft of Androsace imbricata is beautifully in flower. The pure white flowers, from the shortness of the petioles, seem to be seated on the silvery cushion of leaves. This and other perennial members of the genus delight in having their rosettes supported by pieces of stone, so as not to be in contact with the soil. Arabis blepharophylla is just coming into beauty. It is scarcely new, having been introduced in 1865, though it was only figured in the "Botanical Magazine" last year. Its splendid rose-coloured flowers render it a worthy subject of cultivation. It is best raised from seeds, when good plants are soon obtained with little trouble. In passing we observe Chlorogalum Leichtlini, long erroneously known as Camassia alba.

In the Economic house Meninia turgida represents a new plant, and also a new genus of Acanthaceæ. It is somewhat ornamental, and flowers very freely. In habit it is much like Eranthemum, but is better furnished with branches. The flowers are produced in dense terminal spikes or in panicles; they are short and stout, peculiarly reticulated on the inside, with pinkish brown nerves. Its place in this house is due to its being a celebrated febrifuge in its native country, Cochin-China, where it is called Thuong-sou by the natives. It was sent to Kew by Professor Décaisne, flowered in April of 1873, and was figured in July of the same year. The temperature of an intermediate house or stove is necessary for its cultivation. In the Succulent house Sedum Alfredii is extremely pretty in flower. It makes a good basket plant from its free growth and bright green colour, with brilliant yellow flowers, about this time of the year. It is a native of China, and was introduced to Kew some time ago, but has not yet been widely distributed.

Brownea grandiceps is flowering in the Palm house. In colour it does not vie with B. coccinea, but far surpasses that species in its immense trusses of bloom, sometimes 8 inches in diameter. Dr. Lindley mentions an interesting peculiarity concerning the leaves, but which this plant does not seem clearly to show: "Every evening they rose up and lifted themselves from the blossoms to expose them to the dew, so that each morning these beautiful objects were uncovered; but as day advanced the leaves gradually drooped and bent down over the flowers to guard them from the rays of the sun."

LITHOSPERMUM FRUTICOSUM.

A correspondent, "W.," has on page 331 directed attention to the hardy evergreen trailer Lithospermum prostratum, which is really a rich and elegant plant for the spring garden. I beg to name L. fruticosum as still richer in colour, and in all other respects equal to the species to which "W." has referred. L. fruticosum is of more shrubby and erect habit, is a deep, rich, full blue—unequalled in its way by any other flower of the period. It is most profuse in blooming, and its bright sprigs are eminently adapted for bouquets—indeed I believe it is used by some bouquetists rather extensively. Grown as a pot plant for indoor decoration it has a distinct and telling effect amongst the usual occupants of the conservatory, and will contribute a feature to a collection quite worthy of recognition. It is of very easy culture and ought to become popular, which it will do when better known and properly grown. If "W." had seen the miniature staudard plants exhibited by Messrs. E. G. Henderson at the Regent's Park Show on the 28th ult. he would, I think, have awarded them at the least equal praise to that he justly bestowed on L. prostratum. This is a genus of hardy spring-flowering plants of great merit, and only requires to be known to be universally cultivated.—J., *Clapham.*

A Monœcious Aucuba.—A friend lately directed my attention to an Aucuba japonica covered with berries, the blossoms of which had not, he said, been artificially fertilised, nor was he aware of any male plant in the neighbourhood. On examination I found one branch on the lower part of the tree had male flowers, while all the other blossoms were the ordinary female

blossoms of the common Aucuba. Is not this a very unusual circumstance?—John B. Boyd.

[We never heard of a similar instance.—Eds.]

FLOWERS FOR OUR BORDERS.—No. 49.

BRAVOA GEMINIFLORA.—Twin-flowered Bravoa.

The Bravoa geminiflora is a half-hardy plant, producing a tunicated bulb, about the size of a moderately large Hyacinth root, but more elongated. From this bulb proceed three to four pointed leaves, 18 to 20 inches or more long, and from 1½ to 2 inches broad; they are keeled at the back, and usually quite erect. The scape or flower-stem springs directly from the bulb, and is not uncommonly from 3 to 4 feet high, of a round tapering form, and bearing several pointed half-sheathing bracts arranged alternately at distances of 5 or 6 inches from each other.

Fig. 89.—Bravoa geminiflora.

The raceme of flowers terminates the stem, and consists of about sixteen pairs of blossoms, at the base of each of which is a small trifid bract; in the early stages of their growth they are quite erect, and pressed close to the scape, but as they expand the tube of the flower becomes gradually curved outwards, until at length its mouth points downwards. Each flower is about 1 inch or 1¼ inch long, of a cylindrical form, and divided at its mouth into six short, rounded lobes, which, when the flower is fully developed, are slightly spreading; at this period their tint is a delicate salmon or flesh-colour, tinged with green at the base, where the perianth coheres with the seed-vessel.

The Bravoa may be cultivated either as a window bulb or in the open border, where it succeeds perfectly in a warm aspect and suitable soil. The only objection to its cultivation in the window is its liability to become "drawn" from deficiency of light and air; but, in all other points, no plant can be more manageable. It should be potted in a good friable loam, with which a little silver sand should be mingled, unless the soil contains naturally a fair proportion of silicious matter. This is necessary to ensure the requisite porosity; but, unless a considerable proportion of good loam is also present, the growth of the plant will be weak. The bulb should be planted with its neck level with the surface of the soil, in a 4 or 5-inch pot, which will be found amply sufficient, except for the largest bulbs. During the winter months, when the plant is dormant, the soil may be kept nearly dry, but when in activity it requires to be freely watered. It usually commences its growth about the end of April or beginning of May; and, in a warm window, will make rapid progress, producing its flowers about the end of July. After the blossoms have faded the pot should be placed out of doors in a sunny situation to ripen the bulb, and when the foliage has decayed it may be returned to its winter quarters, which may be any airy place inaccessible to frost.

In the open ground its treatment may be inferred from what we have just stated. If planted out in April, while dormant, it should be covered with a hand-glass to protect it from spring frosts; if kept on the window or in a cold frame until the middle of May it may then be plunged into the borders without this precaution. In this situation its height will be less than under glass, and the colour of the flowers deepen to red. It is easily increased by offsets, which may be separated every second or third year, and also by seeds, which may be ripened in the greenhouse or window if the plant is grown on after flowering.

The Bravoa geminiflora is a native of Mexico. Its name was conferred in honour of the Mexican botanist, Bravo.—(*W. Thompson's English Flower Garden.*)

THE THAMES EMBANKMENT.

Without further ceremony than a walk round by the members of the Board of Works another portion of garden enclosure was on Saturday last declared by Mr. W. H. Smith, M.P., to be open to the public. The new garden is immediately west of the Charing Cross railway station, and is a little over two acres in extent. It is laid out artistically, yet with special regard to the purpose of free and easy promenade. The walks are ample, soundly made of asphalte loosely surfaced with light gravel, and are edged with Ivy. A main walk is taken round the enclosure in a serpentine manner, with curved cross walks enclosing shrubberies, lawns, and flower beds, the parts being agreeably proportioned. There are forty-eight flower beds, which will require about fourteen thousand plants. The trees comprise Lombardy Poplars, Planes, and weeping trees, with shrubs which experience has proved suited to the site. The borders at the entrance are brightened by Intermediate Stocks. The garden is from the design of Mr. Vulliamy, and executed by Mr. Meston. It is well conceived and carried out, and likely to be the most artistic portion of the Embankment. The lawns and shrubs on the established portions are in excellent order; the beds are gay with Tulips, the whole reflecting credit on Mr. Sinclair's superintendence.

IN SEARCH OF SPRING.

I do not know what sort of weather you are having in London, but here we have had nothing but a succession of cold easterly winds. I never saw vegetation so backward: no trees are in leaf, the grass is green but does not grow at all, and my Roses have hardly began to move. We are within two months of the Palace Show, and the greater portion of my maiden Briars have not started. The farmers round here are driven frantic; they have no hay left, and they cannot afford to buy any at £8 a ton, so the stock are grazing on the fields which should be laid up for mowing. In fact, I never saw things look more serious than they do now, for if we have another dry summer, we, who live in this wretchedly poor dry soil in Dorset, will have no hay for next winter.

This being our state here, I thought I should like to go into Cornwall, to the most southern and western points of England, and see if I could find signs of spring there, and so, having arranged my duty for one Sunday, I set off the first day for Plymouth. Here I found it colder than at Monkton Wyld, and the country equally backward. Mount Edgecumbe looked as if we were in midwinter, the Hoe was as desolate as Salisbury Plain—the very water of the Sound was of a cold grey colour instead of the lovely silvery-green which one is accustomed to see. I went from Plymouth to Falmouth by the Irish steamer, thinking I should find the warmest town in England an exception to the general rule. But never was I more mistaken, and never was I colder than at Falmouth. I went to look for the Lemon trees which grow out of doors, and I found one which was just beginning to start into life. The gardener said they had never known such a winter, and it was a perfect marvel that the plant had survived. I sailed up the lovely Truro river, past Lord Falmouth's seat, through

woods where the trees except a few Larches were as bare of leaves as a barber's pole.

No spring here, then let me go further south yet; so I posted to the Lizard and stopped a couple of nights at the most southernly inn in England. But it was colder here than at Falmouth; the east wind followed one like an evil spirit, determined to rob you of all pleasure. But it could not do this quite here; the rock scenery of the Lizard coast was too grand and far too interesting for any amount of east wind to make that visit anything but a joy and delight. I suppose most of the readers of our Journal have seen the Lizard, but if perchance any who have not seen it are in doubt where to spend their holiday this autumn let me recommend them to go to the Lizard. There is capital accommodation at Miss Mundy's, the "Old Inn," at Mullion, and also at the Lizard Town or at Cadgwith, and a month might well be spent exploring the wonders of the coast. I shall never forget Kinance Cove and Asparagus Island. It is impossible to describe it, but the artist, the geologist, the botanist will alike find it a rich field for the pursuit of their favourite studies. The varied hues of the serpentine rocks of nearly every colour from white to the deepest red, dripping with water as the sea leaves them, and lighted up by the sun rays, appear like bright jewels that have been laved by the sea and kissed by the sun. It is indeed enchanted ground, and I wished I could have remained longer there; but my time was so limited that I had to push on to Penzance so as to see the Land's End, and stand on the most western point of Old England. I stayed the remainder of my time at Penzance, as there is so much to see there and such charming excursions can be made from it. The "Queen's Hotel," too, is such a capital place to stay at that one feels disinclined to leave it.

I think Mount's Bay the most lovely one in England. St. Michael's Mount from a distance appears to be much further out in the Bay than it really is, and with a dim haze over it, or a setting sun, the grand old rock which has over and over again been stormed, stands out like a gigantic sentinel keeping watch over the Bay that bears its name. Close to Penzance is the picturesque fishing town of Newlyn St. Peters; picturesque indeed it is with its narrow streets and its exterior staircases, but, oh! so dirty, and the odours! I cannot really understand how it is that a plague does not break out, for there literally is no drainage, the filth of each house is thrown outside the door, and you are literally poisoned as you walk through the streets.

There is also a remarkable man at Newlyn in the shape of a policeman. It is told of him that when the snow fell this winter the men of the place, delighted with the rare and unexpected visitor they had not seen for seven years, commenced snowballing, upon which the policeman, thinking it was a shame that he should be left out of the fun, set to work and joined in the fray. On another occasion a man was engaged in the favourite pursuit of chastising his wife. The latter naturally bellowed, and her female neighbours in sympathy went to bring the policeman. He came, he saw, but by no means did he conquer the brute—far from it: he turned round to the indignant spectators saying, "He did not like to be unneighbourly," and marched off declining to interfere. A friend told me this as an illustration of his dictum, "The laws of England cease to have effect when you cross the Tamar. We are here governed by public opinion."

The distance from Penzance to the Land's End is about ten miles, and a one-horse coach goes from the post office every morning. This is driven by a most amusing man, who tells you no end of anecdotes. The age that people attain to in that district is something wonderful. When the gentleman who built my place here asked the late Lord Bridport to sell some land for a churchyard, he replied, "What do you want a churchyard for? No one ever dies at Monkton Wyld." I wonder what he would have said if he had such lives on his copyholds as some of those in the Land's End district. You see that man mending the road; what age do you think he is now? Why he is eighty-six, and he does a hard day's work winter and summer. There are four generations of his family living together; but that's nothing round about here. We have five generations living together, and the best of it is they are all called Matthew. You'd think there would be some difficulty in distinguishing them, but there's not. The great grandfather, who is ninety-six years old, him they call old Matthew (and well they may), the next they call grandfather Matthew, his son is Matthew, the next young Matthew, and the last young Matthew's son Mattie.

On arriving near the Logan Rock the driver introduced me to an old guide, who turned out to be a most entertaining old fellow. "You see this little mead, sir, that reminds me of what occurred here when I was a buoy. Oh, sir! the depravity, the terrible wickedness of buoys. It's in their nature, it seems engrained in them like bee's wax. Well, sir, when I was a buoy about nine years old I was tending some geese, and an otter came out of a hole determined to have one of them geese, but I was determined, too, he should not. Now, I had no terrible amount of courage—I was not over bold—but I could swear, aye, swear terribly, and so I kept swearing at it and throwing stones. The otter kept following me, and I kept running across the meadow, swearing and picking up a stone and hitting him, and then bolting, till I made such a row that a man came up to see what it was about, and then shot the otter. But how I did swear; oh! the depravity of buoys."

Tol Prid Penwith is certainly the boldest headland I ever saw; but in my humble opinion the Land's End district will not compare with the Lizard. But here it was as cold as any other place, so I came home, having failed to find spring; but having enjoyed my visit to Cornwall more than I could have believed possible, seeing that the east wind never left me for an hour.—JOHN B. M. CAMM.

REGENT'S PARK.

THE beds continue to be exceedingly gay with Tulips. Being somewhat later than usual, these gay flowers pertain more to early summer than to spring, and, as Mr. Robson remarks, are apt to interfere with the summer-bedding plants; still there is no gainsaying their enlivening effect. Most of the beds are well filled. Several varieties are planted, but those which are the most effective may be limited to four distinct kinds—viz., Double Tournesol, very gay; Vermillion Brilliant, dazzling scarlet; Cottage Maid, lively rose; and Yellow Prince, bright and sweet. These varieties are clear, distinct, and free for bedding purposes, and, moreover, are inexpensive. Bedding-out is being carried out in full force—in fact, hundreds of Pelargoniums have been planted more than a week ago. The Chestnut Avenue will in a few days be very beautiful. The trees are richly laden with flowers just expanding, and the brightness and freshness of the foliage has not suffered from spring frosts.

EARLY WRITERS ON ENGLISH GARDENING.

No. 4.

GERVASE MARKHAM.

THE Markham family trace their pedigree to a period before the Norman Conquest.* Their Cotham estate, which is near Newark in Nottinghamshire, they acquired by marriage, and there Gervase Markham was born the third son of Robert, about the year 1568.

His ancestors had been too recklessly extravagant for his father to provide him an income, but he gave that best substitute—a good education, but he does not appear to have been to either University. Gervase was an excellent classical scholar, and well conversant with the French, Italian, and Spanish languages; moreover, he was wise as well as knowing, so having the best aids to success, "parts and poverty," he prospered in the world, and is one of the chief worthies of a family rich in clever men.

He was able to write marketably well in verse as well as prose, and I will first and at once notice his rhymed productions. In 1595 he published "The most honorable Tragedie of Sir Richard Grenville," an heroic poem. It is now so rare that, though of only ninety pages, Mr. Grenville a few years since gave nearly £41 for a copy. It has been reprinted recently. In the same year Markham published "The Poem of Poems," which is the Song of Solomon versified. In 1597 "Devereux," a lament translated from the French, the personages mourned for being Henry III. of France and Walter Devereux who fell at the siege of Roan. One of the rarest of booke is "Rhodomanths Infernall, or the Divell conquered; Ariosto's Conclusions, &c." Its author was Philip Des Portes, and this translation, published in 1598, is dedicated by G. M. to Lord Mounteagle.

He says the translation was "first intended for one privat

* Mr. Clements R. Markham, so favourably known as the Secretary of the Geographical Society, and as the author of several very useful literary works, had privately printed in 1854 "A History of the Markham Family." This had been written by his father, the Rev. D. F. Markham. To it and to the courtesy of Mr. C. R. Markham I am much indebted.

man's repast, and the translation was finisht and foorth of my hands above a dozen years agone, a time wherein bumbasted breeches and straight whalebon'd doublets had neither use nor estimation," fashions of France and Spain of which he was not the only satirist.

In 1600 he produced "Tears of the Beloved," and the year following "Marie Magdalene's Tears," two religious poems, recently republished with a memoir by the Rev. A. R. Grosart. In 1608 he translated "Ariosto's Satyres," and in the same year produced, in co-operation with Lewis Machin, "The Dumb Knight." It is a comedy, the plot taken chiefly from Baudello's novels, and the scene assumed to be the Isle of Cyprus. In 1609 he translated in verse from the Italian "The noble courtezan, Paulina;" and lastly, in 1622, the tragedy of "Herod and Antipas," founded on the narrative in Josephus's "Antiquities of the Jews."

In 1599 he published his first prose work that I have seen, "How to chuse, ride, traine, and diet both hunting horses and running horses, &c." It is dedicated to "his singular good father Ma. Robert Markham, of Cotham, in the countie of Nottingham, Esquire." In it he states he has here "gathered together my lives experience," and that "no man's aplaus can better please me," for his father was as fond of horses as himself, and it so fell out that Cotham, his chief manor, became the property of the Duke of Newcastle, who loved horses as well. The manor still belongs to the duke's descendants.

In 1595 was published "The Gentleman's Academie; or the Booke of St. Albans, containing three most exact and excellent Books—Hawking, Hunting, and Armorie, compiled by Juliana Barnes in 1486, now reduced into a better methode by G. M., and dedicated to the gentlemen of England, and all the good fellowship of Huntsmen and Falconers." Another edition was published in 1801. This, I have no doubt, was prepared by Gervase Markham.

I must do little more than record the names and dates of Markham's many books on the same subject. In 1616 appeared his "Methode or Epitome," detailing remedies for the diseases of all "animals and birds kept for profit." In the same year was published his "Cavalarice, or the English Horseman," in eight books, each dedicated to a different patron. Next came forth his "Master-Piece," of which I have only seen the fifth edition, dated 1636. In 1639 appeared his "Complete Farrier," which in the preface he announces as "the last of all my labours," and well it might, for his "Faithfull Farrier" had been published the year previously, yet he had signed its preface "Gervas Markham's last and best labours!" These had been withheld from the press by the publishers to whom he had sold them, and were not published until after his decease. They related to subjects on which he wrote with the authority of a master. So much were his writings on the subject in request, and so many books relative to the subject did he compose, that at last he agreed with their publishers to write no more! In consequence, probably, a work he wrote remained unpublished, and of which Mr. Clements R. Markham informs me he has the MS. It is entitled "Le Marescale, or the Horse Marshall, allso those secrets weh I practise but never imparted to any man." The agreement *not* to publish is as follows:—"Mem. That I Gervase Markham of London, gent., do promise hereafter never to write any more book or books to be printed of the diseases or cures of any cattle, horse, ox or cow, sheepe, swine, or goates. In witness whereof I have hereunto set my hand the 24th daie of July, 1617.—Gervase Markham."

This memorandum has been said to be in the archives of the Stationers' Company, but after repeated searches the courteous officials of the Company have not found it. They have found and copied for me the following entry, which shows that the publishers of those days had contentions about his published works:—"August, 1617. The Court issued an Order to settle the controversie between Roger Jackson and John Mariot for the printinge of the booke called Markham's 'Farewell to Horsemanshippe and Husbaudry.'"

"The perfect Horseman, or the experienced secrets of Mr. Markham's fifty years practice, now published by Lancelot Thetford, practitioner in the same art for the space of forty years," was published in 1655. The preface states that "Notwithstanding all Mr. Markham's promises in his former books to lay open his cabinet councels you shall here find many most rare secrets bequeathed as a legacy to his most intimate friend the publisher hereof." Prefixed to this volume is the portrait of Markham, of which an enlarged copy accompanies these notes.

During the years he was publishing those works he employed his pen and other publishers upon the recreations of rural life. "Country Contentments," relative to hunting, hawking, and housekeeping issued from the press in 1615. "Conceytted letters newly layde open," in 1618, which in modern phrase is "a polite letter writer." "Hungers prevention or the whole arte of fowling" in 1621; and "The Art of Archerie" in 1634.

I now come to the few works which entitle Markham to a place in these notes. The first was "Cheape and Good Husbandry." The fifth edition, the only one I have seen, appeared in 1631, and though including much that he had before published relative to animals, yet it includes new information relative to poultry and bees.

The next was much more original, but I do not know the date of its first publication. The copy before me is entitled, "The English Husbandman—1st part husbandly duties. 2nd, Planting, grafting, gardening, &c. Newly corrected, &c., by the first author, G. M. 1635." In the dedication to the Duke of Lenox he says, "When I was a servant to your noble ancestor, and had houres to bestow on my own studies, then at Layton, I first thought of this work." He ridicules those who translated from Virgil, Xenophon, Libault, and others, justly observing that their directions were for other climates. It is a really practical work, and shows that many of our varieties of fruits are more than two centuries old. For example, among early Apples are Jenitings—Wibourns—Pomederoys—Queene Apples. He details directions for raising stocks from kernels and stones, and those for grafting are good, and so are those for managing the fruit-room. He denounces the undervaluing of our English gardeners, and says, "I call into my remembrance that in all the forraine places I have seene there is none more worthy then our owne." The engravings of knots for the flower garden are many and original.

In 1620 he published "Farewell to Husbandry, or enrichment of barren grounds." In 1631 "Enrichment of the Weald of Kent," which especially recommends the employment of marl as a manure, and seems from the dedication to a Kentish land-proprietor to have been written especially at his instigation. In 1623 Markham had published an edition of "The Country Housewife's Garden," but I am not aware of the date of its first appearance. Of its contents it will suffice to quote, "In the month of Aprill the moone being new sow Marjoram; in the full of the moone Apples of Love."

Just after his death in 1638 a publisher combined the various cultural works of Markham, and published them under the title of "A way to get wealth, containing sixe principall vocations or callings, in which every good husband or housewife may lawfully imploy themselves." The sixth, however, "The making of Orchards," was by William Lawson.

The course of Markham's life was uneventful, being such as is the usual career of a man whose breadwinner is his pen. His knowledge of horses led to his being employed by James I. to obtain him an Arabian horse. Markham imported it from Constantinople, and obtained for it £500 from the King. It is not improbable that he owed his introduction to that monarch to his kinsman, and I believe elder brother, whose memorial stone in the south aisle of St. Mary's Church, Islington, has this inscription—"Here lyeth the body of John Markham, Esq., one of the Serjeants-at-Arms to our most gracious Sovereign King James, &c., who dyed the 26th of August, 1610.

> "He was both gentilke born and gentilke bred,
> And ere he dyed was well marryed
> Unto a vertuous and a loving wife,
> Who losing him loathed her life;
> Whose love hath built this for eternity,
> That he may still be had in memory."

Like his kinsman Gervas was also "well marryed." His wife was Anne, daughter of J. Gelsthorpe, Esq. They had no children.

On referring to the registers of burials at St. Giles's, Cripplegate, I found this entry—"1636. Jarvis Markham, gentleman, February 3." As the year then commenced in March, he was buried in the February of 1637 according to our present calendar. My reference to the registers was a consequence of a statement made in the Rev. Alexander Grosart's memorial that Colonel Chester had made a note that such a record was there. He rests among many more celebrated men, for Milton the poet, Fox the martyrologist, Frobisher the arctic navigator, Speed the topographer, and Dr. William Bulleyn, one of our earliest herbalists, are there interred.

That Markham died poor there can be no reasonable doubt.

He tells us, "Patience I have long since made mine owne and only companion," and there is no will of his or letters of administration to his estate recorded in the indexes at Somerset House.

The prefaces and dedications of his works afford satisfactory testimouy that he was an honest christian man, and this leads me to details of the doings of his namesake—doings that have wrongly been attributed to the snbject of these notes.

Gervase was a name adopted in each branch of the Markham family, and I have now before me records showing that besides Gervase Markham of Cotham, there were as his contemporaries Gervase Markham of Ketlesby in Lincolnshire, and Gervase Markham of Dunham in Nottinghamshire. This last-named was our author's cousin, and the earliest of whose turbulent actions of which I have seen a record was his challenging Lord Darcy of the North. This was in 1616. They had hunted together, and Markham struck a servant of his lordship, who threw him down. was upon him and striking him when Lord Darcy took off his man and reproved him, yet Markham chid Lord Darcy, who replied that if he had not taken his man away he would have beaten Markham to rags. Markham wrote five or six letters to Lord Darcy, subscribed them, but hoping to evade the law did not send them, but dispersed them unsealed in the fields, and they charged Lord Darcy with lying, concluding with the hint that if Lord Darcy wished to speak with Markham and send his boy, he would be well used. Lord Darcy sued Markham in the Star Chamber, where he was censured, and fined £500. Chief Justice Hobart said the letters were libellous, and though no direct challenge there were plain provocations to it, and though the offence was aggravated by the plaintiff being a peer of the realm, yet the sentence arose out of the nature of the offence, not out of the circumstances of the person, for causing death in a duel is murther. The Chief Justice records the sentence in his "Reports," adding he was resolved to punish all such as were guilty of "this damnable presumption." "This sentence of mine," he concludes, "it pleased the King (James I.) much to approve, and it pleased him to say that I did hit his own mind in it. This was the last day in December, 1616, when it pleased him to confer with his poor servant of divers things."

Fig. 90.—Gervase Markham.

In 1627 an information was laid that arms and horse accoutrements were concealed in the house of Gervase Markham, and Secretary Coke issued a warrant to search his house. The arms and accoutrements were found and seized; but Mr. Markham demanded that they should be either restored, or that he might have payment for the same, "considering that he justifieth himself comformable in religion." The Earl of Newcastle applied to the Council in 1629 that the arms, &c., should be restored; and to sustain the application it was certified that Gervase Markham was then bed-ridden, and had from his youth been a Protestant. A certificate also was enclosed from the Rev. Walter Carey, Vicar of Dunham, that Gervase Markham had for eleven years attended the Church, and had no imputation of papistry. Whether he inclined to the Roman Catholic adherents of the Queen's friends may be doubted; but there is no doubt that he favoured the high prerogative measures of the King.

In 1635 a conversation took place at Eagle Hall, Lincolnshire, relative to mustering forces for Charles the 1st, and it was casually observed that Gervase Markham, a kinsman of Thomas Markham, had one of the best horses shown at the Newark mustering.

Sir John Byron, Sheriff of Nottingham, reported in January, 1635–6, that Gervase Markham complained that he was charged excessively for stup money; but the Sheriff thought to the contrary. He was assessed at £50, in regard he was a single man, and had in land £800 a-year, and £40,000, reputed, out at use. He wrote very discourteonsly to the Sheriff, and it resulted in the Serjeant-at-Arms arresting him. Gervase was so infirm, and all his members so useless, that he could not be conveyed to London. It was proved that he had not been out of his chamber for five years, nor out of his bed for two years. Mr. Cary, Vicar of Dunham, again certified to the truth of this statement, and that he had received the Communion in bed many years. He was on his petition set at liberty in March of the same year. He died in January, 1636–7, just twelve months after his arrest, and was buried in the same vault with his father in Laneham Church.

There is a monument to their memory, with a figure of the father in his magisterial robes, and the son in armour with a love-lock descending from his head and fastened to his belt. The armour and the love-lock are symbolical, for he was courageous and amatory. He was an intimate friend of the Earl of Shrewsbury, and the gallant and champion of the Countess, in which chivalric capacity he tourneyed, and was seriously wounded; but he was nearly killed in a duel with Sir John Holles, relative to the killing of one of the Shrewsbury dependants, and probably these wouudings caused the decrepitude which I have noted afflicted him during the concluding years of his life.

During all the years of turbulent and decrepid life I have detailed, Gervase Markham the anthor was actively employed in writing and publishing a series of works on rural affairs, and the mere dates of their appearance are sufficient evidences that he could not be the offender.

CATASETUM MACULATUM.

This belongs to a genus of Orchids more remarkable for the characteristic formation of the flowers than for their ornamental appearance. Nearly all the species have dull purple

and greenish-yellow flowers. C. maculatum is green with purple spots; it succeeds well in an ordinary stove temperature, but requires a decided season of rest by being kept dry at the roots, and in a minimum temperature of 55°. The roots may require water occasionally during the resting period, but no more must be applied than will keep the pseudobulbs from shrivelling. C. maculatum is a very strong-growing species, and of easy culture, and requires rather more depth

Fig. 91.—Catasetum maculatum.

of compost than some Orchids that succeed best in pots. The pot should be filled to one-third of its depth with drainage. The best compost is equal parts of turfy peat and sphagnum; a few bits of charcoal may be added to sweeten the material when it begins to decay. A goodly supply of water is necessary during the growing season, with plenty of atmospheric moisture. When water is applied to the roots it is as well not to wet the pseudobulbs. Should it be hot and dry when the plant is in full growth, it will be benefited by being occasionally syringed overhead.

ROSES.

Roses portraited in Mr. Van Houtte's "Flore" are—1, Bernard Palissy; 2, Charles Lefebvre; 3, Madame Campbell d'Islay, or Triomphe de Valenciennes; 4, Empereur de Maroc;

5, Tricolore de Flandre; 6, General Washington; 7, John Hopper; 8, Gloire de Dijon. Nos. 2, 4, 5, 7, 8 need no appraiser or commentator. (*Vide* note, to which I especially call Mr. Van Houtte's attention, as he once said I was the most picturesque writer of the age!) No. 1 is one of the best of Julea Margottin's children: it is quite distinct; it is an expanded Rose, bombed and frilled like a shirt. I wonder why it went out? It is one of Margottin's masterpieces. I still retain it, but do not recommend it because it has gone out of the catalogues. No. 3 is, when it comes like a zebra, very fine, but usually it is a reluctant opener, like La Reine its parent. I still retain it. I have seen on the same twig a perfect La Reine and a perfect zebra. It is a sporting sport. No. 6 when it opens successfully is a grand Rose. It usually—almost universally—splits its petal band, and looks like a horseshoe. It is a hardy, fine-growing, bud-producing Rose. I gave away thirty fine plants of it for the above reason; still exhibitors should retain it.

Synonymes (Teas), 1, Belle de Bordeaux, or Gloire de Bordeaux; 2, Bougère, or Clotilde; 3, Clara Sylvain, or Lady Warrender, or Madame Bureau; 4, Madame Maurin, or Adèle Pradel, or Madame Denis; 5, Madame Bravy, or Alba rosea; 6, Souvenir d'un Ami, or Queen Victoria; 7, Céline Forestier, or Liesis; 8, Le Pactole, or Madame de Challonge; 9, Madame Desloregchamps, or Adelaide Pavie; 10, Narcisse, or Enfant de Lyon; 11, Catherine Guillot, or Michel Bonnet; 12, Louise Odier, or Madame de Stella; 13, Modèle de Perfection, or Céline Gonod; 14, Auguste Mie, or Madame Rival; 15, Le Lion des Combats, or Beauté Francaise; 16, Louise Peyronny, or Lælia; 17, Madame Masson, or Gloire de Chatillon. These, in my opinion, should not have gone out; I will buy either on their own roots—say twenty plants. 18, Maurice Bernardin, or Exposition de Brie, or Ferdinand de Lesseps, or Auguste Neumann (I see no difference here); 19, Sénateur Favre, or Puebla, or François Fontsine; 20, Sophie Coquerelle, or Julie de St. Aignant; 21, Virginal, or Madame Liaband; 22, Madame Campbell d'Islay, or Triomphe de Valenciennes. —W. F. Radclyffe.

[Mr. Radclyffe sent some specimens of his Roses to a brother rosarian, and the following are a part of his comments—"When I opened the box and spread the contents before me tears of envy almost came to my eyes—such clean, bright, handsome foliage, Felix Genero especially, and so healthy and vigorous too! Having seen leaves from your Rose trees I should like to have a leaf or two out of your book of successful Rose culture."—Eds.]

NORTHERN GARDEN PROSPECTS.

The season of 1874–5 has been as trying a one as many young gardeners will remember; and for the matter of that the veterans will have difficulty in recalling many seasons which have more sorely exercised their judgment and puzzled their skill. I speak of the north of England.

Commencing in October, we had high winds, sleet, rain, and frost, which continued until the beginning of December, when for nearly a month thick snow lay continuously on the ground, accompanied by frost of unusual intensity. Water pipes and gas pipes were frozen up, and both indoors and out the most unremitting and judicious care and attention was necessary to continue vitality in plant life; and despite the most vigilant care great numbers of plants fell victims to King Frost. On the evening of the first day of the new year rain fell copiously, rendering the hard-crusted snow like a sheet of glass. By-and-by the intensely cold atmosphere yielded to the successive days' rains, and was followed by as great a transition of warmth. Water pipes were burst in all directions, and much loss from this cause resulted. January continued mild throughout, and the hitherto torpid vegetation took precocious spring-like life. Fears were now entertained that this precocity would soon receive a withering rebuff; and so it happened, but not to the extent anticipated. During February and March a seasonable coldness prevailed, and the wind continued almost daily in the east. Thus was the immature growth of January checked, and we began to breathe more hopefully in anticipation of the spring months.

April was simply a glorious month. The earth, irrigated by the heavy falls of snow of December, heightened by the copious showers of January, and which was held *in statu quo* by the neutral months of February and March, yet retained great moisture, and consequently, although only about 1¾ inch of rain fell in April, vegetation made rapid progress, heavy nourishing dews falling nightly, a slight frost being perceptible on but one night, from the effects of which we soon recovered. Since the advent of May we have had slight showers, bright sunshiny days, and a daily temperature of 60° and upwards in the shade. But the call was that more rain was wanted, and it came. On Wednesday, the 5th a thunderstorm passed over, and on the evening of the 6th the earth was saturated with gently-falling rain, which continued through the night and up to noon of the 7th. At the present time we have ample reward for past anxiety.

Never do I remember such a wealth of blossom—not on one species of plant, but on all. The severe winter seems to have almost annihilated the living enemies of plant life, and the orchards and gardens, the conservatories and the fields are simply gorgeous in their wealth of bloom, whilst the change from blossom to fruit is being carried on under the most favourable auspices.

For several years past we have experienced severe frosts in the middle of May, and the recurrence of these is now our only fear. As an evidence of the early and favourable season we have an old couplet applicable to the north that

> "A swarm of bees in May
> Is worth a load of hay."

Swarms in the early part of May are held to be *raræ aves*, yet a local paper of the 6th inst. recorded no less than three as having taken wing on the 5th of May, one of which occurring in High Furness, Lonsdale North, is said to be the earliest ever known there in living man's recollection.—Beta.

THE TEMPLE GARDENS.

It is common to regard the great metropolis as composed of bricks, business, and smoke, from which vegetation is banished, and where the budding leaves of spring are not to be seen, yet within two minutes' walk of the busy thoroughfare of Fleet Street are forest trees of full size and healthy, and a few yards further is a smooth expanse of turf of refreshing verdure, and a display of flowers of enlivening aspect. This is in the gardens of the Inner Temple.

These gardens are renowned in the autumn for their displays of the Chrysanthemum, and are also gay in summer, and perhaps especially in spring by a glowing array of Tulips. The beds of Tulips have this season been especially fine, but the recent rains have accelerated the decay of the still bright petals. A border about 70 yards long of Rex Rubrorum is exceedingly rich, while large beds of the double Tournesol are massive and glowing. Beds of Keyzers-Kroon edged with white Pottebakker are very effective, but their beauty is on the wane. These are the only varieties which are grown in any quantity. Scarcely a blank is to be seen in the beds.

It is gratifying to see the encouragement given by the authorities to the cultivation of flowers in the heart of London, and the success which has attended Mr. Newton's efforts in creating a brilliant spring display on the north terrace is suggestive that the south terrace is equally adaptable to the same purpose, and would add a fine feature to the view from the Thames Embankment.

SNAILS AND FRUIT TREES.

How much damage is done to young fruit trees by snails is not easy to determine, but there is little doubt that it is more extensive than is generally appreciated. The power of injury to young trees by snails is immense, and I do not hesitate to say that more damage is done by the midnight feastings of these molluscs than by any other cause or means whatever. Young fruit trees are planted with every care that the work is well done. As spring approaches their bursting buds are watched for with interest; but the trees break stubbornly, and many buds seem to make no progress whatever. In nine cases out of ten the cause of this is the slugs and snails, and yet they are never suspected. The moment the buds swell are they seized by the snails, and damage is done before it is visible to the human eye, except by very close watching. But surely a gardener will watch? Well, he may; but how many amateurs are there who have planted trees to cover their walls, and who never suspect danger from this source? It is to these that the reminder is given—watch for the snails on your young trees. They will, if unmolested, ruin a tree in a single night by eating off the buds that were indispensable to form the future branches. Spread soot and lime along the wall, and, above all, examine the trees by candlelight. This is

one of the little matters of great importance pertaining to gardening pursuits, and is worthy of special attention at this period of the year.—W.

CALCEOLARIA FAILURES.

We have received from several correspondents complaints of the decay of their plants, both herbaceous varieties in pots and bedding plants intended for garden decoration. That failures in Calceolaria culture are extensive we have abundant evidence, and that the causes of these failures are to a certain extent enveloped in mystery we are ready to acknowledge. It must necessarily be so. It is not always easy for a gardener even who has devoted his life to the cultivation of plants, to describe their real state and to intelligibly convey to another precise data leading to a correct appreciation of the circumstances which exert an influence on the plant's condition. That being the case with the gardener, is in a still greater degree so with the amateur; and it is, therefore, less from the statements of others than by incidents of our own experience, that we seek to investigate common causes of failure, and if not to point out a remedy, at the least hope to aid in preventing a recurrence of the evils complained of.

In the case of herbaceous Calceolarias which decay round the collar just as the plants are coming into bloom we cannot prescribe a cure. For the origin of the evil or disease we should be inclined to look back for some months, and such a remedy as can be offered is only in time for future plants by advising a means to prevent the decay being originated in the plant's infancy. There is always a hope of an evil being preventible when it is, at will, producible. That the decay of herbaceous Calceolarias can be produced we have no doubt, and perhaps we cannot do better than give a familiar recipe for its production.

Sow the seed in any light soil, peat predominating. Do not pot-off the plants too soon, but allow them to become drawn in the seed-pan. Let them become dry occasionally until the leaves flag, so that the stem becomes somewhat hardened. Eventually pot them singly into small pots in sandy soil. Let the soil be put lightly into the pots, but press it firmly and neatly round the necks of the plants. As soon as the pots are filled with roots do not shift them, or, perhaps, they may not decay, but suffer them to become thoroughly pot-bound, to flag at times, and carry a few insects. If standing on ashes let them remain to root well through the bottom of the pots. When the foliage has turned yellow and the stems are woody, then proceed to put them in their blooming pots. The pots will lift with a large cake of roots at the bottom. As this cannot be drawn through the pot it must be torn off. In potting, as the plants are rather leggy, they must be put deep into the pots to make them look dwarf. They must have rich soil to make up for lost time, and to further encourage them they must be regularly sprinkled and be kept rather close. By regularly sprinkling the soil must be wet on the surface but dry beneath. Plants so treated may be depended on to decay at the collar just as they commence to bloom. To that practice, or some modification of it, is to be traced the decay of nine-tenths of dying Calceolarias, the remaining tenth succumbing to some injurious and untraceable matter in the soil.

The remedy or prevention is clear. The practice must be reversed. The plants must not be drawn in the seed-pan, they must have no check by want of water, must never be pot-bound, or be infested by insects. They must not root through the pots and have the feeders torn off, and must not be hurried in any part of their life to make-up for lost time. The effect is the same whether the rootlets are torn off or dried-off. The main roots may still look healthy, but their feeders are gone, and, unlike Geraniums or Fuchsias, Calceolarias will not emit fresh feeders at the summons of fresh soil and plenty of water. Instead of that the plants decay. A steady, regular, unchecked growth throughout; the soil richest at the bottom of the pots and never dry; a cool bottom on which to stand the plants, no matted roots through the pots, no fingering round the stems in potting, and healthy plants will follow. If, however, there is a suspicion that some fell agency is lurking in the soil, place crushed charcoal round the necks of the plants and have no fear of its effects.

As a general rule it is not insects or a poisoned atmosphere, nor yet a (normalty) poisoned soil that causes decay, but some little mistake at a critical time in a point of culture that is the real source of the evil. To meet the inquiries of several correspondents we have stated fully the results of our own practice in endeavouring to produce as well as to prevent this troublesome disease. We will notice the failures in the shrubby section on a future occasion.

AURICULAS.

As Auriculas are once more occupying a prominent place in the affections of florists, your readers may care to have some notes of the Show of the National Auricula Association held in Manchester on the 27th of April. I went over from Ireland, expecting to see great things in that, the classic ground of Auricula culture, and certainly I saw a fine display of plants. The entries seemed to me to be very numerous; and the effect of so large a number *en masse* was very cheering to a lover of this delightful flower. The Rev. F. D. Horner, the indefatigable Secretary of the Association, showed a very beautiful grey edge, called Alexander Meiklejohn, which took the premier prize in its class, beating George Lightbody. I, however, do not think it excels that perfect variety. I am apprehensive that it may have a weak stem, but I cannot be certain, as the plant was small and young. Mr. Horner also exhibited an extraordinarily large-flowered plant of Robert Traill, one of the best Auriculas ever raised, but generally rather small in the pip. Mr. Charles Turner showed some very beautiful and well-grown flowers. I much admired his C. J. Perry. It is a blue self, possessing that estimable quality, a satin-like surface, like a Pansy.

But I am not intending to laud exhibitors who are too well known to require it. I will just mention one or two points which struck me, and which may be worth thinking over against the next show. In the first place the exhibition should never have been held where it was. The Town Hall, though a splendid room, was altogether too dark. Plants on the side of the room away from the windows had no justice at all. Surely the Botanical Society of such a city as Manchester, in connection with whose Show the Auricula Association held theirs, could afford a large marquee, the only place in which flowers look to most advantage. In the next place, the space allotted to the Auriculas was too limited. They looked huddled up, and it was nearly impossible to make out what plants belonged to any one exhibitor.

I think also that the minimum number of pips might well be increased from three to five. Three pips may satisfy a judge as regards correctness of marking; but I submit with all deference that a good truss which is able to balance well luxuriant foliage is a very important point. The large number of three-pipped plants necessarily produced a lean and hungry look; and in many instances you could see that the pips had been purposely reduced to three.

I venture also to suggest a relaxation of that rigid rule which some of the old growers observed, and which seems to have considerably swayed the exhibitors, which demands as black a ground as possible in the edged varieties. Almost all the entries for the premium in the three classes of edged flowers had black grounds, and that produced tameness and monotony. We should strive to obtain every shade of colour that is possible into the edged varieties, and I am sure the Auricula would be much more popular. One of the most striking flowers in the Show was a Colonel Champneys, with rich violet ground and grey edge, and yet I am sure it would not have been able to compete for the premium with a black ground variety. I am glad I saw the Show; and all lovers of the Auricula are indebted to the National Auricula Association for what they are doing for our favourites. I hope the Association may prosper and improve in every respect each succeeding year.—Frederick Tymons, *Clk., Co. Dublin.*

CUTTINGS OF PLANTS SENT BY POST.

I observe in your advertisement pages that cuttings of plants of various kinds are forwarded to every part of the United Kingdom continuously by post. Accordingly I sent lately a few cuttings of Geraniums, securely placed in a small pasteboard box, postage duly paid, to a relation. To my surprise I received from the General Post Office, London, a printed notice to the effect that the box was detained by the authorities, "cuttings of plants" not being allowed to pass through the post, being amongst the "prohibited articles."

I replied to the notice, which was signed by G. Tilley, Esq., the Secretary of the General Post Office, requesting him either to forward my box to its destination or return it to me, with the postage paid thereon, as I did not consider "cuttings of plants" to come under the head of "prohibited articles;"

for not only these but vegetables were sent daily through the post. I received in answer to my remonstrance a second printed circular from the Secretary, which I will now quote verbatim:—

"If, as you allege, packets containing plants and vegetables do pass safely through the post, it can only be when they are accidentally overlooked; for if the nature of their contents were discovered they would at once be stopped. Your packet is still detained in the returned letter office; but it will be given up to anyone you may instruct to apply there personally for it." Query, Are Geraniums vegetables—or any kind of flowers?—WILLIAM MORGAN, *The Brewery, High Street, Pembroke Dock, South Wales.*

[Geraniums and flowers certainly are included in the comprehensive term "vegetables." The reason for prohibiting them must be that if succulent and crushed by the official punches the sap exuded might injure other letters. If enclosed in a box and sent by parcel post we think there would be no objection made by the post-office officials.—EDS.]

NOTES AND GLEANINGS.

OWING to the backwardness of the flowers this season the CRYSTAL PALACE ROSE SHOW will be held on the 26th of June instead of the 19th.

—— THE NOTTINGHAM AND MIDLAND COUNTIES ROSE SHOW AND HORTICULTURAL EXHIBITION will be held from the 8th to the 10th of July, both days inclusive. The prizes offered are liberal, and the Nottingham Arboretum in which the Show is to be held is of itself worthy of a visit.

—— THE NEW WINTER GARDENS AND NURSERIES in the Great Western Road, Glasgow, laid-out by Messrs. J. & R. Thyne, were opened on the 1st inst., when a floral and musical gala was held in the new grounds, which were crowded with several thousands of ladies and gentlemen. Refreshments were provided by Messrs. Thyne for their visitors, and the band of the 1st Royal Dragoons were present. An address was delivered by Sheriff Clark in the absence of the Lord Provost. The Gardens and Nurseries are on the Kelvinside estate, and from the commanding terrace on which the principal houses are situated a magnificent view is had of the Campsie and Dumbartonshire hills, while in the immediate foreground is a beautiful artificial loch, which, by-and-by, will be planted. The general plan of the Gardens is similar to that of Messrs. Veitch's establishment in Chelsea. The frontage is to a new road leading from the Great Western to the Patrick Road, and extends for 300 feet, while the space on which various glass houses are erected covers also nearly 300 feet. From the roadway backwards 25 feet is a terrace with a rise of 25 feet, planted effectively with Limes, Elms, Poplars, and the choicer Coniferæ. A broad avenue of Coniferous trees divides the Gardens into equal portions. Facing the west and parallel with the roadway are two conservatories, each 60 feet in length, one for stove and the other for greenhouse plants. At right angles to the conservatories are the Heath and show houses, each 60 feet long, with glass pits of a corresponding length with the houses, and forming as it were aisles to the main buildings. Parallel with the conservatories are six ranges of houses for propagating and forcing purposes, while the right and left of the whole establishment are occupied by a large Azalea house and a cool fernery, the latter especially being charmingly laid out.

—— IT is reported that an Italian professor has discovered that PERFUMES FROM FLOWERS have a chemical effect on the atmosphere, converting its oxygen into ozone, and thus increasing its health-imparting power. As the result of his researches, he states that the essences of Cherry, Laurel, Lavender, Mint, Juniper, Melons, Fennel, and Bergamot are among those which develope the largest quantities of ozone, while Anise and Thyme develope it in a less degree. Flowers destitute of perfume have no such effect. He recommends that dwellers in marshy localities and near places infected with animal emanations should surround their homes with a profusion of the most odoriferous flowers.

—— THE death of the well-known head of the great Ipswich implement manufacturers took place at Ipswich on April 29th. JAMES ALLEN RANSOME was born at Yarmouth in July, 1806, but the county of Norfolk has little claim on him beyond that of mere birthright. So early as 1809 he removed with his father's family to Ipswich. He was buried on the 3rd inst., and not only did the civic authorities but full 15,000 of his fellow townsmen attended the interment.

NOTES ON VILLA AND SUBURBAN GARDENING.

KITCHEN GARDEN.

THIS ought to be a busy time in this department, because from the genial nature of the weather everything grows very fast. It ought to be the aim of everyone to look well after all crops by hoeing and earthing them frequently. This not only benefits the crops, but it destroys the progress of weeds, which come up by thousands, and if not checked would impoverish the soil to the detriment of any crop for the whole season. An excellent Scotch gardener from whom I received my first lessons in gardening always said, "Hoe every inch of ground whether you see a weed or not, for depend upon it there are generally hundreds ready to spring up at the first shower, though they may not be visible at the time of hoeing." Unless it is done in this way we may be constantly at the work, therefore it is easy to see that in a simple matter like hoeing it is necessary to do it well.

Thinning Crops.—This is also an important matter in gardening, and should be attended to opportunely and with judgment. Everything needs sufficient space to develope itself or the crop is not satisfactory, therefore do not delay thinning. Onions, for instance, which make an abundance of roots though the top is small, should be thinned early, though it may be done at two or three different times, otherwise those that are left are much interfered with and checked by the operation. Carrots, Turnips, Spinach, Parsnips, and many other vegetables come under this rule. If time can be afforded it will pay to prick out plants of the Cabbage tribe on a border of good workable soil. Such plants generally become stouter and better developed by the operation, though in large gardens they are frequently planted out from the seed bed simply because other work presses so much.

Sow the main crop of Scarlet Runners. This vegetable is the most profitable of any for a town garden, provided it is allowed a rich soil and plenty of water while growing. It will thrive almost anywhere. A courtyard, even if all walled-in, will afford a place for this vegetable; and even though it requires tall sticks for its support when grown out in the open ground, yet as these are not easy to obtain in many towns, and moreover are expensive, the Scarlet Runner will thrive against a wall and look also ornamental. The plan sometimes adopted is to drive nails at equal distances, say 8 inches apart, both along the top and bottom of the wall, and then connect them together with twine; this affords sufficient support to the plants which grow rapidly.

Keep up successional sowings of Peas, Broad Beans, and Turnips as well as Cauliflowers for a late crop. Another small sowing of White and Purple Cape Broccoli and the main crop of Purple Sprouting should now be sown. Most of the spring Greens must be sown at once, such as Tall and Dwarf Green Curled Kale. Scotch Cabbaging, Buda and Ragged Jack Kales must also be sown, and a successional sowing of Drumhead and Green Curled Savoy. Lettuces, too, must not be forgotten; it is as well to sow these thinly in rows where they are to stand, as they do not transplant well in dry hot weather. Earth-up Cauliflowers, and if the weather should set in dry they will need mulching and also an abundance of water. Those who grow Tomatoes may safely trust them out now if the plants are strong and have been well hardened off. They, too, like a rich and deep soil to grow them well. Places should be specially prepared for them, and during growth they should be as systematically trained and stopped as a Grape Vine.

Prepare places for Vegetable Marrows. The plants will need a temporary protection at night for a short time after being put out. This is a useful vegetable and generally does well in town gardens, and will accommodate itself to any half-rotten heap of rubbish to grow in, but they must never be allowed to suffer from want of water.—THOMAS RECORD.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

KITCHEN GARDEN.

APRIL, which is proverbially showery, was one of the driest months we have experienced. May has also brought bright weather, yet with some refreshing rains. On the first day of the month, the opening day of the Alexandra Palace, about half an inch fell, and Saturday last was almost a rainy day in the metropolitan district; no growing crops, therefore, suffer for lack of moisture at the roots. In a few days the earliest-sown Peas will be in full blossom, and they look strong and healthy. A second sowing is coming on rapidly; and the third, which comprises G. F. Wilson, Fillbasket, and Veitch's Perfection for succession, has had the wire guards removed, the ground between the rows hoed, the rows earthed-up, and sticks placed to them. Another sowing has been made; this time Round or

summer Spinach has been sown between the rows. A second sowing of Windsor Beans has been hoed and the rows earthed-up. We have watered the earliest Cauliflower plants and hoed later crops; indeed, we keep the hoe at work as much as possible, as, if the weeds are well kept down now, there is little trouble with them afterwards. We are now cutting Asparagus. This work must not be done in a careless manner; the heads must be cut before they begin to open, and the knife should be thrust down close to the head to be cut, so that those heads coming up may not be injured; it is usually cut about 3 or 4 inches under ground. Weeds came up numerously on the beds, and it has been necessary to hoe them.

A sowing of Cauliflower may now be made for the autumn crop. Veitch's Autumn Giant and Walcheren are the two best sorts. Broccoli may also be sown. Atkins's Matchless Cabbage, if planted out now from the beds, will form nice heads for cutting from in the early autumn months. Another sowing may be made to succeed them. Hoe and thin Carrots, Onions, and all growing root crops as soon as they are ready. The hoe cannot be too much at work amongst them, and much injury is caused by allowing the crops to grow too thickly together. The late Carrots, Parsnips, Beet, &c., may be thinned-out at once to the distance they are intended to be—Carrots and Beet 5 or 6 inches apart, Parsnips 8 or 9 inches from plant to plant. A few rows of the French Forcing or Early Horn Carrot should be only partially thinned, the remainder may be thinned-out as required for the kitchen. Cardoons may now be sown in trenches prepared as for Celery; the soil in which the seeds are sown ought to be light and rich. The seeds may be planted about 2 inches apart; it is as well to have plenty of plants, and this will allow of a goodly number to be thinned out; 9 inches is a good distance between the plants.

Vegetable Marrows and Cucumbers for pickling may be sown now on ridges under handlights. In the neighbourhood of London waggonloads of Cucumbers are produced without the aid of glass in any form, but if handlights can be used the crops are more certain. Turnips sown now will come in ready for use in July. Sow when the ground is moist; freshly-dug ground is best. Celery may yet be sown for a very late crop. Early-sown plants are now ready for pricking out; it is best to do this when the plants are small; plant on light but not rich ground. Our earliest sowing of Scarlet Runners and Dwarf Kidney Beans are through the ground. The present is a good time to make another sowing, as the first may be cut off by frost.

FRUIT AND FORCING HOUSES.

Pineries.—The young plants in succession houses should have careful attention, as any serious check to the plants in the early stages of their growth cannot be remedied by subsequent attention. It is not easy to do everything just at the right time at this season of the year, and all available house room is required for forcing purposes. Pine pits are too often used for forcing all sorts of crops—Dwarf Kidney Beans, Strawberries, Grapes, &c., and many gardeners fancy that Pine plants may be crowded closely together without injury to the ultimate welfare of the plants. Now, we strenuously dissuade from overcrowding at any stage; rather grow a dozen plants well than grow twenty-five in the same space which would give no satisfaction. In the next place repot the plants before the roots are matted round the sides and amongst the crocks at the bottom of the pot. The pot should be fairly filled with roots before repotting. When the plants are potted a bottom heat of 90° ought to be kept up, or even if the temperature of the bed rises to 100° no harm will befall the plants, as the roots are not close to the sides of the pot after repotting. If the temperature of the bed has fallen too low, and, as is not unfrequently the case, there are no pipes for bottom heat, the tan or decaying oak leaves must be turned over and some fresh material be added. Oak leaves make the best bed for Pine plants.

In the fruiting house where the fruits are in various stages of development it is dangerous practice to interfere with the beds, and those who have not the advantage of hot-water pipes underneath the bed labour under much more difficult circumstances than those who have. If it is necessary to turn the bed to increase the bottom heat, the plants receive a check by being too cool at the roots for a day or two, then the temperature may rise to 120°, which may do even more harm in the opposite direction. We can easily keep up the heat of our beds to 85° or 90° without disturbing the plants. The minimum temperature in any of the houses may be 70°, and may rise to 90° after the house is shut up in the afternoon; plenty of atmospheric moisture is necessary with the above temperatures.

Peach Houses.—In houses where the fruit is approaching the stoning period the fruit should have a final thinning. Many good growers make the last thinning after the fruit is stoned, and even then they allow a few to be picked off during the second swelling. If the trees are in good health the fruit will not drop off, and to allow it to remain during the trying period of stoning is merely to allow it to take the nourishment away from the fruits that ought to come to maturity. To have good Peaches the fruit must be thinned to at least a foot apart; Nectarines to 9 or 10 inches. If trees are weakly and have been overcropped the previous season, the fruit ought to be thinned-out even more than this. No more growths ought to be allowed on the trees than are required to bear fruit the following season. Syringe the trees with a garden engine night and morning if the house is large; small houses may be managed with an ordinary syringe. The border should be surfaced with manure, but no manure water ought to be applied to the roots. If any of the leaves are seen to curl up it is caused by the Peach aphis, and nothing destroys it so well as fumigating with tobacco smoke.

PLANT STOVES AND ORCHID HOUSES.

The occupants of these structures are now, if in a healthy condition, making vigorous growth. Many species of Orchids are just starting into growth, and at that time they throw out plenty of fresh young rootlets at the base of the growth: if any such require repotting, now is a good time to do it. We have repotted all the plants in the cool house that could be done without injuring the flower spikes. Odontoglossums, such as O. crispum, O. triumphans, O. gloriosum, and indeed all the cool section, have been repotted. We take care not to give them a very large shift, and any plants that were not making strong growths and had not quite filled their pots with roots, were placed in pots the same size as they had been previously.

Goodyeras and Anæctochilus have been repotted. This fine class of "foliage plants" have not been much seen in public recently, and in few places are they found in healthy condition. They succeed very well in our Cucumber house, grown in an ordinary handlight and shaded by the Cucumbers overhead. The pots are filled quite three parts full of drainage, and the compost is equal parts of turfy peat, sphagnum moss, and potsherds. Repotted Anthurium Scherzerianum. This is a splendid plant; it is easily grown, and now to be obtained at a cheap rate. It requires similar treatment to Cattleyas: fill the pots quite half full of drainage, over the crocks place some fresh sphagnum, and fill up round the roots with Orchid peat mixed with sphagnum and crocks; the plant should be raised up in the centre of the pot. When the plants are in full growth syringe them with clear rain water; syringing overhead does not injure the flowers.

FLOWER GARDEN.

The bedding plants are nearly all ready to be planted out, and if the weather continues mild we shall have some of them out before this is in print. Calceolarias and Zonal Pelargoniums will not be injured by any frosts we are likely to have now. It ought to be stated that our plants are hardy from exposure, and the plants are large. This is a busy time with the florist. Pinks, Carnations, and Picotees require sticks to be placed to them, and to see that they are free from green fly. Auriculas must have the decaying flowers removed, as they are unsightly, and seed pods may exhaust the plants.

Preparations must also be made to repot the plants. Clean pots of the sizes required and suitable mould must be in readiness. Some of ours have been repotted, and the remainder will be done in the course of a week or two. If repotted now the plants have time to make their growth before the sultry days of July and August. All the plants are now in a north aspect, and aired freely night and day; in fine weather the lights are entirely removed. Pansies will well repay any care that has been taken of them during the winter. If the beds were not mulched two months ago, a dressing of rotted manure ought to be applied at once, and the plants delight in plentiful supplies of water. Cow manure is the best stimulant for Pansies. Tulips are now coming into bloom, and those who are so fortunate as to possess choice sorts will see that they are shaded during the hottest part of the day. To enjoy them thoroughly they ought to be in beds protected by a canvas tent.—J. Douglas.

TRADE CATALOGUES RECEIVED.

Dick Radclyffe & Co., 129, High Holborn, London.—*Catalogue of Plants and Garden Requisites.*

Thomas Bunyard & Sons, Maidstone and Ashford, Kent.—*Select List of Bedding-out Plants.*

John Harrison, Darlington.—*Catalogue of New Roses, Clematises, and Bedding Plants.*

T. Simpson, Preston Road Nursery, Yeovil, Somerset.—*Catalogue of Bedding Plants.*

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Blackburn.—May 17th, 18th, and 19th. Mr. W. Ditchfield, Hon. Sec.

Crystal Palace Company.—Flower Show, May 29th; Rose Show, June 26th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.

Coventry.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.

Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.

BURTON-UPON-TRENT.—June 16th. Mr. Wm. Shave, Bond Street, Sec.
JERSEY.—Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.
GLASGOW.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
FAREHAM.—June 23rd. Mr. H Smith, Sec. [Hon. Sec.
EXETER (Rose Show).—June 25th. Mr. J. N. Gray, Queen Street Chambers,
REIGATE (Rose).—June 26th, 1875. Bushby Britten, Esq., Hon. Sec.
WISBEACH.—June 30th. Mr. C. Parker, Hon. Sec.
MAIDSTONE.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.
BIRMINGHAM.—July 1st, 2nd, 3rd, and 5th. Mr. Quilter, Aston Park Sec.
SPALDING.—July 1st and 2nd. Mr. G. F. Barrell, Hon. Sec.
SOUTHGATE.—July 3rd. John Miles, Esq, Hon.-Sec., Southgate, N.
DURHAM AND NORTHUMBERLAND.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.
GRANTHAM.—July 7th and 8th. Schedules, &c., from Mr. Lyne, Bookseller.
FROME (Rose).—July 8th. Mr. A. R. Baily, Hon.-Sec.
KILSBY.—July 8th. Sec., Mr. C. E. Bracebridge.
NOTTINGHAM.—Rose Show, &c., July 8th, 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.
OXFORD (Roses).—July 9th. Mr. C. R. Ridley, Hon.-Sec.
HEWORTH.—July 14th. Mr. R. H. Feltoe, Heworth, York, Hon.-Sec.
OUNDLE.—July 14th. Mr. Alfred King, Sec.

It will gratify a large circle of our readers to know that the new Judge who has been appointed to succeed Mr. Justice Huddleston in the Court of Common Pleas is the son of the late Dr. Lindley, Professor of Botany in University College, editor of the *Gardeners' Chronicle*, and so long connected with the Horticultural Society. Mr. N. Lindley, Q.C., was one of the leaders in Vice-Chancellor Hall's Court, and is author of a "Treatise on the Law of Partnership."

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

BOOKS (*C. W. Milne*).—"London's Encyclopædia of Trees and Shrubs" will give you most of the information you need. (*R. H. Walters*).—Our "Flower Garden" Manual, you can have it free by post if you enclose five postage stamps with your address.

MILDEW ON VINES (*G. H.*).—Write to the preparer of the composition for information.

VINE LEAVES BLISTERED (*J. A. P.*).—The appearance of the leaves has nothing to do with insects of any kind. If the air of the house has been kept strongly heated and moist, and then a cold current of air admitted over the leaves, it has checked their expansion and produced the blistered appearance.

VINE LEAVES SCALDED (*A. A. and X. Y. Z.*).—The leaves are scalded, and the scalding is occasioned by bright sunshine on them whilst wet. Early ventilation and shading until the leaves are dried by it will keep them from being scalded.

WHITE PARSLEY.—"*Sigma*" would be glad to know what is the white Parsley used by chemists to flavour essences.

VIOLA MONTANA (*Puzzled*).—It is a hardy perennial; flowers light blue and scentless. It is propagated and cultivated the same as the common Violet. As you have signed no agreement, and we know none of the circumstances, we cannot give an opinion upon whether your landlord can turn you out summarily. If he can you have no right to claim the future fruit. We never recommended boiled oil to be used with red lead to thwart mice. The oil would tempt them to eat the peas.

ARRANGEMENT OF FLOWERS (*A. W. B.*).—We never undertake to arrange the flowers in beds and borders. We only criticise proposed arrangements.

CALCEOLARIAS DECAYING (*C. W. S.*).—The decay is caused either by some pernicious influence of the soil, or is the result of some check which the plants received in their early stages of growth. See what is said in another column.

SEEDLING PANSY (*R. Maries*).—It is a very fine specimen of the purple and yellow class. The purple is rich, and the size and substance of the large flower superior.

SHRUBS *versus* RABBITS (*A Continental Reader*).—There are very few rabbit-proof shrubs. When driven by hunger in severe weather these animals will eat almost anything of a vegetable nature; even Onions we have known them to attack. From observations in a rabbit-infested district, where trees of many kinds were planted twenty years ago, those only which have really escaped the rabbits are Rhododendrons. We believe this to be the best of all evergreen shrubs for planting where these animals abound. We should be glad to hear the opinions of others as to whether this immunity was accidental or whether Rhododendrons are really, in all districts, invulnerable to rabbit attacks. It would settle a point of importance, for if affirmative proof is given, of which we are sanguine, additional value would be given to this valuable evergreen. Mr. Abbey says, in another column, that the Corsican Pine (Pinus Laricio) is rabbit-proof, which is very welcome information. He has also, on page 352, vol. xviii., fully treated on the subject, and has given the following list of trees and shrubs which are not commonly interfered with:—Alder and Birch which on swampy ground it may not have been possible to approach, Hornbeam, and Wych Elm, English and Norway Maple, Turkey Oak, Willow, Wellingtonia gigantea, Cedrus Deodara, C. Libani, and C. atlantica; Cupressus Lawsoniana, Thuja Lobbii, American Arbor-Vitæ, Thujopsis borealis, Portugal Laurel, Juniperus communis, Pinus Cembra, Pinus excelsa, Lilacs, Gorse single and double; Ribes, none doing better than the Black Currant in strong soil or damp ground; Azalea, common Berberry, Gueldor Rose, Dogwood, Snowberry, Hazel, Sweet Briar, Blackthorn, Cotoneaster microphylla, Weigela, Spiræa, Rhus Cotinus, Rhus typhina, Canadian Gooseberry, Ribes album, Bird Cherry, Butcher's Broom, Spurge Laurel, Euonymus, Deutzia scabra, St. John's Wort, and Elder. We shall be glad to hear from other observers of any trees or shrubs of which they have proof that rabbits will not nibble.

VIOLETS (*Hamlet*).—The varieties of Violets to which you allude are in private gardens, but a majority of those named may be had of most of the principal London and provincial florists. The Double White is best propagated from rooted suckers or layers, and it may be done now in loamy soil, enriched with leaf soil or well-rotted manure, choosing a border shaded from mid-day sun, a north or east border answering well. Plant in rows 9 inches apart every way, and by omitting every fifth row you will have access to the plants. They should be well watered at planting and during dry weather, keeping off all runners and weeds. At the end of September the plants, or a part of them, may be taken up with balls, and be placed in a cold frame, having air freely in mild weather; a portion may be potted in 6-inch pots, and be kept plunged in ashes in a cold frame for about six weeks, when they may be removed to a light airy position in a greenhouse.

HARDINESS OF DRACÆNAS (*South of Ireland*).—The New Zealand Dracænas would not, we fear, succeed outdoors in the south of Ireland, though it is probable they would in warm positions and with protection. We should be obliged if those who have tried them would state the result.

TROPÆOLUM TRICOLORUM AFTER FLOWERING (*A Constant Subscriber*).—When the flowering is past assign the plant a light airy position, and keep it rather sparingly supplied with water after the leaves begin to turn pale, gradually reducing the supply, and leave off altogether when the foliage is quite yellow. The tubers may then be removed from the soil and placed in dry sand, and be kept in a cool place until the beginning of September, when they should be potted. They need only have the tubers covered with the sand, for when deeply covered they sometimes make shoots several inches long before potting, and which are easily broken. They should be potted before the shoots are an inch long.

ROSES ON THE MANETTI STOCK (*A. Beechey*).—They succeed admirably in soils which are not suited to the Briar, and require in a light soil liberal treatment. They should be planted so that the junction of the graft or bud with the stock is covered 2 to 3 inches deep. The best manure for a light soil is cow dung, but well-rotted stable or farmyard manure answers well. Water freely at the roots and overhead during dry weather, sprinkling a handful of guano in a space of about 18 inches around each plant, and wash it in with the water. This may be done early in May and every month up to September. The roots should have a mulching of manure in December. Prune in February if the weather is mild, shortening the strong shoots to five or six eyes, those moderately strong to three or four, medium growths to two or three, and the weaker spray to one or two eyes. The best liquid manure is guano, 1 oz. to a gallon of water.

TREATMENT OF VINES (*Richard Watson*).—The Vines ought to give you a good return; in fact, they should with ordinary treatment be worth £1 per Vine, but as you lack experience we advise you to make yourself acquainted with some work upon the subject. Our "Vine Manual" would give you the required information. It may be had by post from our office for 2s. 7½*d.* Where they are showing two and four shoots on each spur, remove all but one, or if the spurs are wide apart—you may leave two, selecting the best and most fruit-promising. If no fruit shows leave the lowest shoot. Stop the growth at one joint beyond the bunch, and if no fruit shows pinch at the sixth leaf. The laterals to be stopped to one leaf continuously throughout the season.

TREATMENT OF VINES AFTER INARCHING (*B. B.*).—Leave a few shoots upon the stock and above the junction so as to draw the sap past it, and when the union is complete, as it will be in about six weeks, gradually remove the shoots above the junction, and by degrees remove them altogether, as you may be justified in doing by the growth of the scion. It will grow very freely after the union is complete, and may then be detached, or you may cut it half through at first, and in a week cut through the other half. You may not have any fruit upon the Vine which you use as a stock, but if any show upon the scion you may take a bunch or two; and yet it is more desirable to secure a strong cane without fruit than to have fruit and a weak cane.

SHADING ROSE HOUSE (*Idem*).—There is no good in shading a Rose house employed for cutting, as the Roses will be out so soon as they expand. The only object in shading such a house is to prolong the bloom, but Roses do not like gloom or shade, and unless the shading be very light, and only used in bright weather, it will interfere with the ripening of the wood and the future flowering. Manetti stocks may be grafted outdoors in February or March, or even now if you have any scions with the eyes in a dormant state.

SHEEP BARKING FRUIT TREES (*D. W.*).—The cleanest, neatest, and most permanent mode of prevention is to tie thin strips of wood or old building laths round the stems, first putting round a strip of hay to prevent abrasion of the bark, and tie with rough-tarred yarn. Dressings of lime, &c., are, if not washed off by the rains, rubbed off by the sheep in dry weather.

SEAKALE RUNNING TO SEED (*A Young Gardener*).—You have no cause for fear. Let the plants grow until near flowering and then take off the flower heads, leaving all the leaves you can on the stems. Eyes for future crowns will form at the base which, if thinned out when an inch or two long, will perfect crowns for forcing next winter. If the base growth is weakly encourage with liquid manure. The unopened flower heads are excellent when cooked.

PLANTS FOR SPRING BEDDING (*R D.*).—Two months is a long time for plants of this class to be in full beauty. Some of the most useful plants for the purpose you name are Alyssum saxatile compactum, yellow; Arabis mollis variegata, which is effective from its variegation and sheet of white flowers; Aubrietia Campbellii, blue; A. græca, blue; Bellis aucubæfolia, finely-netted golden-variegated leaves and red flowers; the double red, white, and pink Daisies (which you have); Cerastium tomentosum, white foliage and white flowers; Cheiranthus Marshalli, yellow; Pyrethrum Golden Feather for its golden foliage; the variegated Thymes, both T. citriodorus aureus and T. aureus marginatus; Iberis gibraltarica, white; the Primula acaulis varieties, the double crimson, white, lilac, and yellow; Myosotis dissitiflora, blue; M. sylvatica, blue. Reds are not easily had, the best are Silene pen-

duls, pink; and Saponaria calabrica, pink. Violas and Pansies perform an important part in spring gardening, especially Violas, Blue Bell, it is of dwarf compact habit, an early flowerer, violet shaded with blue, yellow eye; V. cornuta Imperial Blue Perfection, violet blue, dwarf, and free; V. lutea major, golden yellow, early, and very good; V. Golden Perpetual, is very profuse blooming, bright clear yellow; V. Corisande is also free blooming, and a pale primrose colour; the best white is V. cornuta alba. Pansies suitable for the purpose are the well-known Cliveden Blue, Purple, White, and Yellow; and others are Imperial Blue, deep blue, one of the very best; Dean's White Bedder, early and one of the best; Bedfont Yellow, early and free; Blue King, light blue, free blooming and very effective. All are best raised from cuttings, which bloom more freely and earlier, not growing so vigorously as seedling plants; exceptions are Pyrethrum Golden Feather, Silene, and Saponaria, which are best raised from seed, the two latter being hardy annuals. The propagation and culture of all these would take up more time and space than we can devote to the subject. We shall be glad, however, to render you assistance if you are in any difficulty.

Evergreen Shrub for Wall (*Idem*).—Magnolia grandiflora, Exmouth variety, would do, but it ought to have a wall of at least 20 feet in height. Escallonia macrantha would suit such a position, and it is fine in foliage, and flowers freely late in the summer.

Names of Plants (*Mrs. L.*).—Lonicera tartarica, Tartarian Upright Honeysuckle. It is one of the hardiest of shrubs; is deserving of a place in every shrubbery, for not only is it highly ornamental, but will grow in any soil or situation. The flowers vary from pink to white. The wood being hard and yellowish-grey is used for making walking sticks and instrument handles. It is a native of eastern Russia. (*T. H.*).—Erysimum cheiranthoides; common name, Treacle Mustard. (*South of Ireland*).—It is so far as we can determine from a spray, Sequoia sempervirens. (*Rev. T. O'Grady*).—Epimedium alpinum, *L.*, var. rubrum, *Hook.* (*Bot Mag.*, t. 5671). (*M. R.*).—3, Alonsoa incisifolia. The Begonia is a florist's variety, which we cannot name. (*Alpha*). —The seeds are apparently those of a Desmodium.

POULTRY, BEE, AND PIGEON CHRONICLE.

THE BLACKTHORN SPRING.

We conclude this must be called a blackthorn spring. We have looked in the country lanes for leaves, and we have seen none. The blackthorn has alone decked the hedges with its flowers, and when this is so southerners know it is to be a bad time for man, and beast, and bird. There is another old-fashioned saying in the south—

> "When the cuckoo comes on the bare bough
> There will be sorrow, and sorrow enou'."

This year the cuckoo came to leafless trees, and the 1875 chicken season has set in very sorrowfully.

Some weeks ago we mentioned the unhappy accounts we had from poultry yards in various parts of England, and we are sorry to hear, in most cases, they have not improved. We ourselves have had many nests of clear eggs, and those from birds which were in the past season marked for their breeding successes. Eggs have not hatched at home, and so it is not to be supposed that they would hatch in nests away from home. Friend after friend we have spoken to on the subject, letter after letter we have received—all have a *rechauffé* of the same grievance. In runs where there were only three or four hens do not seem to be more productive than where the cock had a dozen wives, and we have noticed this as much in Bantams and the smaller breeds as in Cochins or Brahmas; consequently we have heard many complaints this season of quite a new kind. Breeders who last season sold their cockerels and cocks as breeding stock to others are, we hear, frequently receiving letters to say the birds have been useless for breeding, and that the disappointment has been consequently very great, for the best hens had been mated with the new blood, and great things hoped for. Two of our friends have had such letters from purchasers of their stock who, in a burst of indignation, did not hesitate to say that the birds had been tampered with. We can only recommend them to try again.

> "There still is one door open—
> The door of hope, my dear."

And perhaps now, when the suns are really warmer and the whole place brighter, the "tampered with" cockerels may yet be the fathers of exhibition chickens; but it is late—very late. There is hardly time for any spring now, so close are the summer months upon us.

We know of exhibitors of many years' standing—clever men, who go to work quite scientifically—who have this season been quite nonplussed; they could not make out what had come to the birds, or what was wrong with the eggs. Then they compared notes with friends, and found out all were sailing in the same great boat, and that they were no worse off than their neighbours. So they comforted themselves with the reflection that the east winds must have blown from Northumberland to the Straits of Dover, addling the eggs, or incapacitating their producers as it went!

Late chickens are generally a great nuisance; they are in the way of the older birds and give endless trouble; but this year it seems we must either have them or none at all, and hatchings which have generally ended in April must now be carried into June, for surely before then the east winds will have blown themselves out. No one need really be discouraged at their bad luck and give up even yet sitting their hens this season in disgust, as there are so very many companions in adversity, for even in adversity it is pleasant not to suffer alone.

There are some early chickens about; we know of two or three breeders who have done better than commonly, but these were from eggs principally laid in January. The blackthorn had not begun to bud then, for we find that the January eggs hatched very much better than those of February and March; but then, January eggs were "few and far between," and most people do not care for very early chickens, and rest contented till February and March. It is on them that the blackthorn has blossomed so unkindly. Even all the little pet arrangements seem to have failed this year: nests made in warm corners, which have hitherto had such fine broods hatched in them; nests fashioned with warm materials or turf foundations; exact waterings with tepid water; all the wonted careful watchings after hens when off their nests to feed and dust—all these little minutiæ to which in other years we have attributed particular successes, seem to have gone for nothing this season. We can speak from experience—sad experience. We made our nests warm, we watched the sitting hens off and on their nests again, we rained refreshing drops on the eggs, but all to no purpose. Our care was bestowed on "clear" eggs, or eggs whose inmates faintly chipped their shells two or three days after they should have done, and then quietly resigned their baby lives, unable, as Mrs. Dombey before them, "to make the effort."

The few chickens that have been hatched, we hear from many, are mostly feeble and weakly little creatures, and are liable to every kind of ailment—cramp, and cold, and leg-weakness. Truly this blackthorn spring will long be remembered. We look forward to some of the early chicken shows to see what those who generally are to the fore in the early prize lists will do this year. We wonder if they will have managed to procure something early out of the vast poultry resources of Lancashire and Yorkshire, so as still to keep up their ancient prestige, or whether they will send small and juvenile representatives of their breeds, or leave the classes empty and keep their baskets at home. If they think of the latter expedient, surely schedule-framers should look out and take, before it is too late, the advice offered in a friendly contemporary, of specially modifying their schedules to meet this especial emergency.

If this wretched time had been confined to nests of eggs incubated in rooms, and baskets, and cold out-houses, we should have been inclined to think that the dry weather and sharp winds necessitated an extra allowance this year of moisture and heat; but we find ourselves, and hear from many others, that Ducks which made their nests on the ground and had every advantage that Nature can afford, have been equally unsuccessful. So we can only believe that the east winds have been most unusually severe, and that the poultry world has done all it could do, though for the most part in vain.

As regards the results of this blackthorn spring, we are inclined to think they will be one of two. Either we shall have the prices of good cockerels and pullets higher than ever, and have £20 where last season we were content and proud to take £10, or—and we sincerely hope this will not be the case—it will cause a severe check to the fancy, having sickened and wearied some of its best amateur supporters. It will thus have been the first serious stumblingblock in the highway of the poultry world, and those will then begin to laugh who long years ago, in the early days of the fever, prophesied sooner or later some deathblow to what they were pleased to call "an infatuated people." We hope this will not be the case, and though we think the price for birds to be now quite high enough, still we shall gladly hail the first alternative, if it is to be either of the two results.—W.

BROODY HENS.

In the article signed "Hampton-in-Arden," in last week's Journal is the passage, "Out of the large number I keep, I have this spring been able to keep them from becoming broody until quite recently." Now, has any method been pursued to prevent broodiness? If so, would this gentleman tell us what it is?

I keep Brahmas principally, and the fault I find with them is they do not become broody. They have been laying since November almost daily. I feed on hot Indian meal in the morning, sometimes scraps at midday if cold, and a little corn in the evening. They have an excellent grass run and stable-yard. Even now I have only one Brahma pullet broody, the hens laying daily. Two cocks and fifteen hens are my stock.—Sudbury.

ESSEX POULTRY SHOW.

Allow me to inform your readers that a poultry Show was held at Brentwood in the year 1865 in connection with the annual Show of the Essex Agricultural Society, then and there held, and that all the winners of prizes, including Mr. Cresswell himself, were paid their prize-money within a week of the show day, and that all prizes will most certainly be paid in 1875 as

promptly as they were upon the former occasion. I was Hon. Sec. in 1865 as now; and I think, before writing as he has, that it would have been courteous in Mr. Cresswell had he made some inquiry of me as to the probability of his being paid in case he should exhibit and win prizes on this occasion.

It is not for me to vindicate the Essex Agricultural Society from the aspersions cast on it by Mr. Cresswell in ignorance of the facts. I will only say that if he were acquainted with these he would be aware that the Society had nothing to do with the non-payment of the prizes at Stratford in 1874, and that the Show to be held in July next is not "a proposed Essex Agricultural Society's Poultry Show."—R. D. Postans, *Brentwood.*

EPWORTH SHOW OF POULTRY, &c.

The tenth annual Show was held at Epworth on the 7th inst., and was in all respects a great success, the entries being far in advance of those of any former year, and the quality, especially in Pigeons, such as is rarely seen at a spring show.

Game were very many in excess of any previous year, the quality throughout being of the highest character in all the classes. Mr. Matthew's pens were empty, the baskets laying at Crowle station when we left that place after four o'clock in the afternoon. In Black and other Red cocks Mr. Martin won with a grand bird, a Brown Red, in which it would not be possible to find many faults; second being a handsome bird of the same colour and locally bred. The Black Reds were not so well up in quality as the Brown Reds, the same remarks applying to the hen class as well, the winners Brown Reds, the first very good, and second losing only from being a little broody, while by far the best pen in the class was left out on account of the face being unnaturally black. Cocks, Any other colour, were first and cup for Game and Yellow-legged Pile, very hard and close-feathered, and second a smart nice-coloured Duckwing. Pen 108 was also a good one of that variety. In hens was as good a Duckwing as has been seen of late, and a Pile second. *Dorkings* good but few in number, as also the *Spanish*, the cup for the next section going to this class. In Mrs. Altsep's pen the hen was dying when the awards were made. In *Brahmas* the winners were very good, but the first-prize hen had a large tumo[illegible]r on her breast, and it is a question if this should have been passed over, though we observed her in the same position at the Wharfedale Show on the following day. *Cochins* were a fair lot, Buffs winning. *Hamburghs* and *Polands* were not large entries, but there were some capital pens in all classes, Silver and Gold winning respectively in Polish. La Flèche and Black Hamburghs won in the Variety class, Sultans being also noticed. There were classes for single cocks and single hens except Game, in which Spanish were placed first, the hen referred to being especially fine. *Bantams* were shown singly, and were good classes. In Red *Game Bantam* cocks the first was by far the best Brown Red we have ever seen, and this bird won the cup easily; the second a Black Red was a grand bird, but minus one sickle. In hens of that colour both winners were Black Reds, both of which were good in all points, although the latter was somewhat larger than is desirable. Cocks, Game, any other colour were first a real good Duckwing, and second a Pile; and in hens the first was an exceedingly neat Pile, and second Duckwing. In Bantam cocks, any other variety, the winners were Blacks, the first in fine bloom, and second good but short of one sickle feather; and in the hens the first was Black and second Silver Sebright. The Selling class was bad except the first-prize Spanish. *Ducks* seemed to be quite a failure. Some pens were empty, many arriving late.

Pigeons, as before hinted, were the best section, every class being well filled, but on account of the unexpected influx of entries the pens had to be placed so high as to prove most inconvenient for the Pouters, which should in all cases be placed under the eye, as is often proved by the reversal of awards in the different positions. Carriers were a good class, but some of the pens were a little too dark for easy inspection, while all the rest were in much better positions. A Dun cock was placed first, this bird being the cup-winner on the following day; second a Dun hen, and third a Black cock (Baker). The eye of this bird having been slightly injured, prevented his taking a high position. Pouters a grand display of twenty-one entries, and not one really bad bird. The first a Blue cock of grand proportions; second a Black, almost equally good; and third a Blue, very fine in all respects. Mr. Nottage's pens were empty. Fifteen birds received notices. Tumblers, any colour, were all Short-faces; the first and cup for best pen in the Show, an exquisite Almond in every respect; second a Kite which we believe is unequalled, and third an Agate. Some other good Almonds were shown, but many were too dark and muddy in feather. Jacobins were a large but not a good class; first was a capital Red, second a Yellow, and third White, both very good. In Fantails were some grand birds. First a very small White of high carriage and grand motion; second a larger bird but yet very good; third a Blue, small and good in all respects. Turbits were almost a puzzle, so close was the competition. First a Silver, second a Red, and third a Shell-crowned Black, all perfectly clean-thighed, with good hog manes, gullet, and curl, although some were not so short and stiff as to please those who go in for head properties alone, and which we look upon as a great mistake. Magpies a good class, Yellow, Red, and Black coming to the front. In Barbs the first was Yellow, capital in skull, and second and third Blacks, the latter a little spouty. In Antwerps the first was a very good Silver Dun Short-face; second a Red Chequer, very good in head; and third a Silver Dun, not in the best condition. Dragoons were about one of the best classes in the Show. A Red of splendid colour and almost perfect head was first; second a Blue, fine in all respects, and third a strong Grizzle, all cocks, though there were some fair good hens, pen 434 especially a perfect bird. In the Variety class the prizes were awarded in duplicate, this being such a class as is rarely seen. The first a Blue Owl (Foreign), the smallest and most perfect in all respects but eye, which was a little yellow, the bird being very young; extra first a Black Mottled Trumpeter, evidently a cross from the English, and imported, good in all properties and splendid in foot-feathering; second and extra second, Spangled Ice and Pigmy Pouter; third a Blondinette, and extra third a Black Capucian. In the Selling class the first was a Red Jacobin; second a Red Barb, and third a Magpie. Mr. Baker won the cup for points in Pigeons.

Cage Birds were about as numerous but not as good a section as that of last year, though winners, as a rule, were quite up to the mark. In Yellow Canaries first was a Norwich, and second a Manchester Coppy. Buffs containing a grand highly fed Norwich. A specially good Green won in the next class; the second being a Variegated. Neither Goldfinches nor Linnets were as good as in previous years, but it would be quite difficult to meet with more perfect birds than the winners. In the Variety class the first was a Dun Norwich, second a Bullfinch, and third a Dun.

Rabbits had two classes, the Lops proving a good lot. First was a yellow-and-white doe, said to be 24 inches in ear, but with our known easy measurement quite 23 by 4¾ inches, and yet these were not the best properties of this Rabbit, the style, aleekness, and carriage being such as must be seen to be understood. Second a tortoiseshell doe, 21 by 4½ inches in fine order. Highly commended fawn-and-white, 21 by 4¾ inches; fawn doe 21 by 4¾ inches; grey-and-white 21¼ by 4½ inches; fawn buck 21¾ by 4¾, and a tortoiseshell doe 21¼ by 4¾ inches. In the Variety class first was a grand Silver-Grey buck; second a very good Himalayan, and third Belgian Hare. Very highly commended Mr. Swetman's Angora doe, which, however, needs grooming, her hinder quarter carrying as much matted wool as would make a small bolster.

Of *Cats* there were but three, any of which was well fit for the show pen. First a good Persian rather dirty; second a Black, and third a Red Tabby. The whole Show was judged by Mr. Hutton.

Game.—*Black-breasted and other Reds*—*Cock.*—1 and *hc*, J. Cock, Worcester. 2, Miss F. Rimington, Epworth. *vhc*, Salea & Bentley, Crowle; Spence and Cavill, Sheffield; J. F. Walton, Rawtenstall. *Hen.*—1, W. G. Waters, Elsham. 2, H. E. Martin, Sculthorpe. *vhc*, Dr. A. Cameron, Epworth. *hc*, Dr. A. Cameron; G. Oultram, Belton. *c*, G. H. Fitzherbert, Sevenoaks.

Game.—*Any other colour.*—*Cock.*—Cup and 1, J. F. Walton. 2, J. A. & H. H. Staveley, Driffield. *vhc*, H. Butler, Hennor. *hc*, G. H. Fitzherbert; W. G. Waters. *c*, S. Matthew, Stowmarket. *Hen.*—1, Salea & Bentley. 2, J. F. Walton. *hc*, E. Winwood, Worcester; G. Yates, Thorne; J. Wright; J. N. Jackson, Newark.

Dorkings.—1, W. Harvey, Sheffield. 2, J. Chester, Thorne. *hc*, J. H. Heather, Retford (2); Mrs. E. Allsopp, Worcester.

Spanish.—1, H. Beldon, Bingley. 2, J. Powell, Bradford. *hc*, E. Brown, Sheffield. *c*, J. Parker.

Brahmas.—1, W. Whiteley, Sheffield. 2, J. F. Smith, Sheffield. *hc*, W. G. Waters; W. Harvey; J. F. Smith. *c*, Dr. J. Holmes, Chesterfield.

Cochins.—1, Mrs. E. Allsopp. 2, S. R. Harris, Cusgarne. *c*, C. Wilson, Eton; Lowley & England, York; T. Pierson, Pickering.

Hamburghs.—*Golden-spangled.*—1, H. Beldon. 2, G. Holmes. *Silver-spangled*—1, H. Beldon. 2, G. Holmes.

Hamburghs.—*Golden pencilled.*—1, H. Beldon. 2, C. Judson, Peckham. *hc*, J. Smith, Lincoln. *Silver-pencilled.*—1, H. Beldon. 2, R. W. Bracewell, Earby, Leeds.

Polish.—1, H. Beldon. 2, A. & W. H. Silvester, Market Hall, Birmingham.

Any other Variety.—1, E. Walton, Horncliffe, Rawtenstall. 2, H. Beldon. *hc*, A. & W. H. Silvaster.

Any Variety Except Game.—*Cock.*—1, J. Powell. 2, Wells & Ayre. *hc*, E. Winwood. *Hen*—1, J. Powell. 2, E. Winwood. *hc*, J. F. Walton; J. Earnshaw, Rotherham; Wells & Ayre. *c*, A. Spencer, Driffield.

Game Bantams—*Black-breasted and other Reds.*—*Cock.*—Cup and 1, W. F. Entwisle, Bradford. 2, E. Walton. *vhc*, T. S. Stephenson, Newbegin, Beverley. *hc*, W. D. Little, Blackheath; C. E. Wallace, Wavertree; G. Holmes. *c*, W. Taylor, Sculthorpe; Dr. A. Cameron. *Hen.*—1, W. F. Entwisle. 2, E. Walton. *hc*, W. Taylor; J. Clifton, Hatfield; G. Lewis.

Game Bantam.—*Any other colour.*—*Cock.*—1, E. Dawson, Epworth. 2, A. Smith, Halifax. *vhc*, R. J. Hartley, Altrincham. *hc*, Salea & Bentley, Crowle. *c*, W. F. Entwisle. *Hen.*—1 and *vhc*, E. Dawson. 2, W. F. Entwisle. *hc*, W. G. Galloway, Bowden; A. Smith.

Bantams.—*Any variety except Game.*—*Cock.*—1, R. H. Ashton, Mottram, Manchester. 2, Miller & Beanland, Keighley. *vhc*, A. & W. H. Silvester. *hc*, W. H. Young, Driffield. *Hen*—1, A. Smith. 2, A. & W. H. Silvester. *hc*, W. G. Water; R. H. Ashton; Milner & Beanland.

Selling Class.—1, J. Powell. 2, J. Smith.

Ducks.—*Aylesbury or Rouen.*—1, C. Young, Driffield. 2, Z. G. Maw, Newland. *Any other variety*—1, A. C. Bradbury, Nuthall, Nottingham (East Indian).

PIGEONS.

Carriers.—1, E. Horner, Harewood, Leeds. 2, H. Yardley, Market Hall, Birmingham. 3, J. Baker, Kew Bridge, London. *vhc*, H. Yardley; E. Horner, Harewood, Leeds. *hc*, J. E. Crofts, Worksop; E. Heath. *c*, A. H. Clark, Old Swinton.

Pouters.—1, J. E. Crofts. 2 and *vhc*, J. Hairsine, Hull. 3, W. Harvey. *hc*,

H. Yardley; J. E. Crofts; Mrs. Ladd, Calne (2); A. Preston, Spalding; E Horner; J. Baker (3).

TUMBLERS.—1, Cup, and 3, H. Yardley. 2, J. Baker. *vhc*, H. Yardley; J. Baker (2). *hc*, A. & W. H Silvester (3); W. Allen, jun., Mexborough; E. Horner. *c*, J Gardner, Preston.

JACOBINS —1, T. Holt, Bradford. 2, E. Horner. 3 and *vhc*, J. Baker. *hc*, J. E. Crofts; W. Barvey; T. Holt, Bradford.

FANTAILS.—1 and 2, J. Baker. 3, S Lawson, Preston. *hc*, J. F. Loversidge, Newark; H. Yardley; T. Pierson; J. Walker, Newark; T. S. Stephenson; A. Smith; W. J. Warhurst.

TURBITS.—1 and 3, J. Baker. 2, T. S. Stephenson. *vhc*, H Yardley; Miss F. Seanor, Leeds. *hc*, A. & W. Silvester; J. Baker. *c*, Pickering & Duggleby, Driffield; Wells & Ayre; E. Horner.

MAGPIES.—1, Miss F. Seanor. 2, J. E. Crofts. 3, M. Ord, Sedgefield, Durham. *vhc*, E. Horner. *hc*, H. Yardley; J. E. Crofts; E. Horner.

BARBS —1 and *vhc*, J. Baker. 2 and 3, E. Horner. *hc*, H. Yardley (2); C. Wroot, Hull. *c*, J. E. Crufts.

ANTWERPS.—1, J. Gardner. 2 and *vhc*, W. F. Entwisle. 3, H. Yardley. *hc*, J. Hairsine. *c*, H. Gough, Wolverhampton.

DRAGOONS.—1 and *vhc*, E. Heath, Blackburn. 2, R. Woods, Mansfield. 3, W. G. Watera *hc*, H. Yardley; R. Woods; Miss F. Seanor; J. Baker (2). *c*, H. Yardley; E Horner.

ANY OTHER VARIETY.—1, J. Baker (2). 2, A. & W. H. Silvester (2). 3, H. Yardley; E. Heath. *hc*, H. Yardley; A. & W. H. Silvester; M. Ord; W. Harvey (2); J. Baker (2). *c*, Miss F. Seanor; B. Hudson, Driffield; E. Horner.

SELLING CLASS.—*Single Bird.*—1, R. G. Sanders, Beverley. 2, C. Wroot. 3, E. Horner. *hc*, J. Baker; R. G. Sanders. 3, H. Yardley; A. Smith.

CAGE BIRDS.

CANARY.—*Yellow.*—1, H. N. Fosbrooke, Leeds. 2, B. Hanson, Thorne. *hc*, T. Green, Gainsborough. *Buff.*—1, W. G. Waters. 2, T. Green. *Green or Variegated.*—1, T. Green. 2, H. N. Fosbrooke. *hc*, H. N. Fosbrooke; T. Green. *c*, W. Gravill, Thorne; R. Pearson, Whitby.

GOLDFINCH.—1 and 2, C. Marshall, West Stockwith. *vhc*, J. Boyes, Epworth. *hc*, W. Gravil; G. Yates (2); T. Green; S. Whitehead, Haxey.

LINNET.—1, R. Pearson. 2, J. J. Temperton, Butterwick. *hc*, T. Green; Master W. B. Hudson, Epworth; J. Boyes.

ANY OTHER VARIETY.—1 and 2, R. Pearson (Bullfinch) 3, T. Green. *hc*, R. Pearson (Goldfinch Mule); F. Bramhill (Blackbird); Master F. Allen, Epworth (Parakeet); J. Coker, Hull (African Love Bird, Love Bird, and Cut Throat).

RABBITS.

LOP-EARED.—*Buck or Doe.*—1, W. Allison. 2, H. Pickworth, Spalding. *hc*, H. Pickworth, Spalding; F. and E. J. Fell, Blackburn; A. Hudson, Hull (2); W. H. Ottley, Worksop; J. Mann, Burton-on-Trent. *c*, F. and E. J. Fell; T. Green, Crowle Wharf.

ANY OTHER BREED.—1, A. Hudson (Silver-Grey). 2, G. Kirkby, Sheffield (Himalayan). *vhc*, H. Swetman, Fulford (Angora) *hc*, G. C. Livett, Soham (Belgian Hare); E. Stubbs, Spalding; F. Sabbage, Northampton (2); A. Canty, Barton-on-Humber. *c*, R. H. Glew; H. Pickworth (Dutch); W. G. Watera (Himalayan).

CATS.—1, T. Steel, Epworth (Angora). 2, Miss Skelton, Burnham. *hc*, J. R. Haraley, Althorpe.

CRESTED NORWICH CANARIES.

(Continued.)

FIRST-CLASS Crested Norwich birds are few and far between, and are somewhat difficult to obtain even when bred from the best of stock. From strains which have made some marks at exhibitions it is more likely that promising specimens may be bred. It is not an everyday occurrence that crested birds possess the essential qualifications—namely, high condition, quality, and closeness of feather, and having a full-flowing perfectly formed dark crest.

Much to my gratification whilst at the last famous Darlington Bird Show, I was pleased to find so exquisite a specimen (as is represented in our engraving) upon the show stage. The class in which it was exhibited contained twenty-nine birds, many of which were of high merit, and for one in particular to head the lot is conclusive evidence that it was justly entitled to the beautiful silver medal it gained on that occasion—the gift of the Judge who had the honour of awarding the prizes. Excepting in one instance (that of Belfast Show, where the famous bird was defeated by a Manchester Coppy bird) the bird has defeated all comers in various parts of England, and as the owners of it have remarked, "rarely failed to bring home just honours."

In my remarks upon Crested Norwich Canaries, page 360, I briefly described the characteristics of them in the respective classes in which they were exhibited. Next to the even-marked crested are classed those with dark, grizzled, or clear crests, and it is to the foremost of these varieties we now refer. The specimen shown by Messrs. G. & J. Mackley, Norwich, in class 13 (No. 437) at the last Crystal Palace Show, stood at the head of forty-eight others—a glorious triumphal finish to the past season. The bird has a fine dark crest, every feather of which is as it should be. Altogether the bird is most attractive in appearance. It has been put up for breeding purposes, with a tolerably good prospect that some of its offspring may follow the parental example.

It may be interesting to state some of the shows at which Messrs. Mackley's bird played a prominent part:—Norwich, Darlington, Lowestoft, Fakenham, Yarmouth, Belfast, Baildon, Reading, Crystal Palace, &c.

Mem., dated May 3rd.—"We are glad to say he is up breeding, and looks like a 'star.' His hen has five good eggs, and expect her to hatch this week."—GEO. J. BARNESBY.

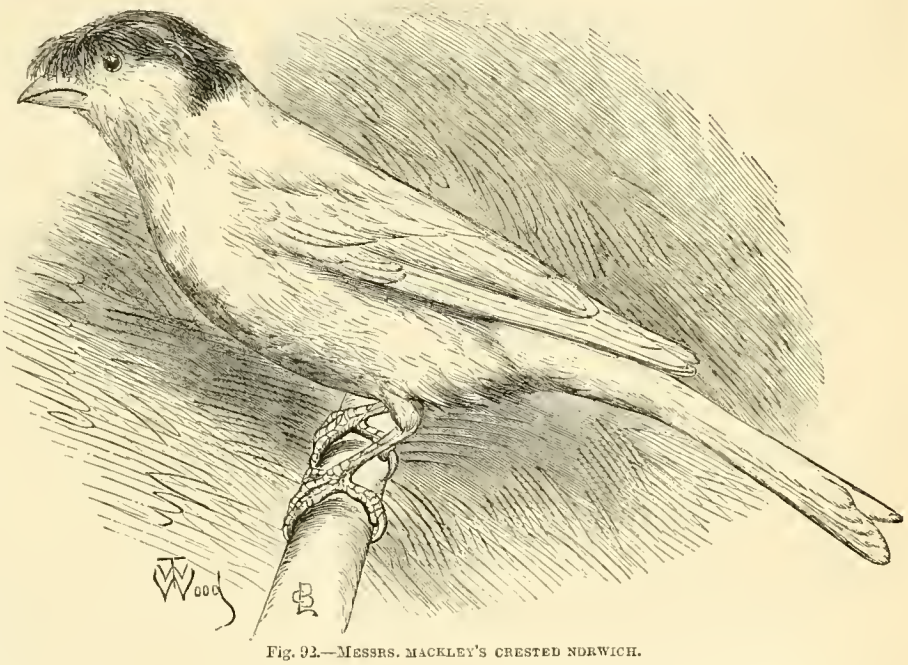


Fig. 92.—MESSRS. MACKLEY'S CRESTED NORWICH.

STACKSTEADS POULTRY SHOW.

THE Show of Poultry, Pigeons, and Rabbits in connection with that of agriculture generally was held on Thursday last, a small paddock being devoted to the purpose of poultry, &c. Turner's pens were used and fixed on three sides of the field, the entries of poultry being very small, while those of Pigeons and Rabbits were large.

In *Game* the cup was won by Mr. Brierley with Brown Reds; Messrs. Walton's Piles running close for that honour. *Dorkings* were only poor, and the *Spanish*, of which there were but two pens, do not call for special notice, while *Cochins* were pretty good in both classes. In *Brahmas* the awards might with advantage have been reversed, the second being by far the best. Messrs. Duckworth, Fielding, and Robinson divided the prizes in *Hamburghs*, these only being birds of any note. In Game *Bantams* Black Reds of good quality won the cup, but we did not agree with the awards in the next class, for though the Piles in the first-prize pen were good, yet the second-prize pen had not pretensions in common with the Brown Reds in pen 235, which were commended. A class was provided for White Bantams, the first being a nice pen, but the rest only poor. In the next class Blacks were the winners, and these were very good. In the Selling class the first and second were Dark Brahmas, and very good for the price.

In *Ducks*, *Geese*, and *Turkeys* Mr. Walker's well-known stud was well to the front, these classes being about as good as any in the Show. There were several classes for local exhibitors, and some of the birds were quite equal to those in the ordinary classes.

In *Rabbits* the Angoras were first on the list, but these were badly placed, the second-prize Rabbit being by far the best, and in Himalayans the first was poor in all respects; the second ought to have occupied that position, and the second prize should have gone to pen 326, Hey of Rochdale. Lops were a good entry, Mr. Irvine winning both prizes; first with a Tortoiseshell doe, and second with a Black-and-white, both good Rabbits, but second by far the best, and we believe this was a reversal of all preceding decisions.

In *Pigeons* Carriers were first, and, as in all classes, were shown in pairs. The winners were Blacks but not in high

condition. In Tumblers Kites were first, but we preferred the second-prize Blue Balds to them. Barbs were well placed, the Red cock in the first-prize pen was a gem; equal second being awarded to Yellows and Blacks. In Owls the awards were made to Foreign birds, the first to White and second to Blues. Mr. Richmond's pair of Blue English should by all means have been noticed. In Pouters the first were White, and second Red, the class only poor. Fantails were good and well placed. Turbits being first Yellow, and second White. In Dragoons we would have placed Mr. Wood's bird in a higher position, the winners were Blue. Trumpeters were good, but only one prize was awarded. Red Chequers were first in Antwerps, two seconds being awarded to Silver Duns. In the Variety class the first were Black Fairies, second Black Magpies, and equal second plain-backed Ice Pigeons.

GAME.—*Black or Brown Reds.*—Cup, 1, and *vhc*, C. W. Brierley, Middleton. 2, R. Payne, Brierfield. *hc*, J. Fletcher, Stoneclough. *Any other variety.*—1, J. F. Walton, Rawtenstall. 2, J. Fletcher.

DOBBINGS.—1, J. Walker. 2, W. H. King, Sandfield, Rochdale. *hc*, J. Stott, Healey, Rochdale; W. H. King; J. H. Ashworth, Broadley, Rochdale.

SPANISH.—*Black.*—1, H. Wilkinson, Earby. 2, J. Thirsk, Bradford.

COCHIN-CHINAS.—*Cinnomon and Buff.*—1, J. Walker. 2, J. Royle, Manchester. *Any other variety.*—1, J. Walker. 2, T. & F. Aspden, Church, Accrington. *hc*, A. Bamford, Middleton.

BRAHMA POOTRAS.—*Light or Dark.*—1 and 2, T. F. Ansdell, Cowley Mount, St. Helen's.

HAMBURGHS.—*Golden-pencilled.*—1 and 2, G. & J. Duckworth, Church. *Silver-pencilled*—1 and *hc*, J. Robinson, Garstang. 2, J. Patrick, Stacksteads. *Golden-spangled*—1 and 2, G. & J. Duckworth. *Silver-spangled.*—1 and 2, J. Fielding, Newchurch. *Black.*—1, J. Robinson. 2, W. Bentley, Holmfirth. *hc*, J. H. Hoyle, Newchurch; E. Walton.

GAME BANTAMS.—*Black or Brown Red*—Cup, W. F. Addie, Preston. 2, E. Walton. *hc*, W. F. Entwisle, Westfield, Bradford (2); W. F. Addie. *Any other variety.*—1, Bellingham & Gill, Burnley. 2, J. Riley, Accrington. *hc*, J. R. Fletcher. *c*, W. F. Entwisle.

BANTAMS.—*White, Clean-legged*—Cup, T. Green, Crawshawbooth. 2, T. Cropper, Bacup. *Any other variety.*—1, J. A. Dakin, Roe Cross, Mottram. 2, T. Cropper. *c*, H. B. Smith, Broughton, Preston; North & Wood, Fartown, Huddersfield.

FRENCH.—1, E. Walton. 2, R. A. Boissier, Penshurst.

ANY OTHER VARIETY.—1, T. Cropper. 2, A. A. Vander Meersch.

SELLING CLASS.—1 and 3, A. Bamford. 2, K. Dawson, Shaw, Oldham. *hc*, A. & J. Trickett, Waterfoot.

DUCKS.—*Aylesbury.*—1 and 2, J. Walker. *Rouen.*—1, J. Walker. 2, A. West, Worsthorne, Burnley. *hc*, E. Snell, Harrowden, Stamford. *Any other variety.*—1, J. Walker. 2, H. B. Smith, Preston. *vhc*, J. Walker; H. B. Smith; A. & J. Trickett.

GEESE.—1 and 2, J. Walker.

TURKEYS.—1, J. Walker. 2, J. Shorrocks, Bacup.

DISTRICT CLASSES.

GAME.—1, J. Patrick, Stacksteads. 2, E. Brown, Rawtenstall.

DORKINGS, SPANISH, COCHINS, OR BRAHMAS.—1 and 2, W. Hargreaves, Bacup.

HAMBURGHS.—1, J. Fielding. 2, L. Dearden, Stacksteads.

BANTAMS.—1, F. E. Furness, Rawtenstall. 2, E. Furness. *hc*, T. Cropper; J. Hoyle, jun.

FOWLS OR DUCKS.—1, Furness & Sudall, Rawtenstall. 2, A. & J. Trickett. *hc*, E. Lord, Bacup; A. Taylor.

PIGEONS.

CARRIERS.—1 and 2, J. Stanley, Blackburn. *hc*, H. Yardley, Birmingham.

TUMBLERS.—1, W. J. Warhurst, Staleybridge. 2, H. Yardley. *hc*, R. White, Manchester.

BARBS.—1, R. White. 2, J. C. Boothley, Stockport. *vhc*, J. Stanley. *hc*, H. Yardley; A. A. Vander Meersch.

OWLS.—1 and 2, T. Kirby, Rochdale. *hc*, J. C. Boothley; A. Warburton, Haslingden.

POUTERS OR CROPPERS.—1 and 2, W. J. Warhurst.

FANTAILS.—1 and *hc*, W. J. Warhurst. 2, J. Chadwick.

TURBITS.—1, E. Heath, Blackburn. 2, F. S. Barnard, Tottenham. *hc*, T. Cropper.

DRAGOONS.—1, W. J. Warhurst. 2, J. Stanley. *hc*, R. Woods, Mansfield (2); J. Stuttard, Colne; W. J. Warhurst; C. A. Pearson, Walton-on-the-Hill.

TRUMPETERS.—1, A. A. Vander Meersch.

JACOBINS.—1, A. A. Vander Meersch. 2, J. Richmond, Oswaldtwistle.

ANTWERPS.—1, J. Stanley. 2, W. Harrison, Burnley; B. Robinson, Burnley. *hc*, J. S. Collier, Wellfield, Rochdale; R. White. *c*, J. A. Wilkinson, Rochdale; G. Thickett, Rochdale.

ANY OTHER VARIETY.—1, J. Richmond. 2, W. J. Warhurst; R. White. *hc*, E. Heath.

RABBITS.

ANGORAS.—1, S. Buckley, Healey, Rochdale. 2, J. Hallas, Huddersfield. *hc*, R. A. Boissier. *c*, J. W. Harling, Burnley.

HIMALAYANS.—1, J. Booth, Coupe, Manchester. 2, R. Hopkinson, Fishpool, Bury. *hc*, R. Hopkinson; W. Hey, Rochdale; J. Hallas.

ANY OTHER VARIETY.—1 and 2, J. Irving, Blackburn. *hc*, R. Hopkinson. *c*, A. Chew, Bacup.

JUDGES.—*Poultry:* Mr. Simon Fielding, Trentham, Stoke-on-Trent; Mr. James Dixon, North Park, Clayton, Bradford. *Pigeons and Rabbits:* Mr. Thomas Ridpeth, Park View, Withington, Manchester.

WHARFEDALE POULTRY SHOW.

THE seventy-seventh annual Show was held at Otley on Saturday last, and substantial prizes being offered the entries were considerably in excess of those of any previous year, this being the case more especially in the Pigeons, where several classes had been added for that popular Yorkshire peculiarity the Antwerps, a cup also being given. The pens were rather of the old-fashioned kind, and these being nearly worn out we would advise a change for more modern ones.

There were eight classes for *Game*, and the quality of birds was good, though the cup being awarded to Black Reds, Messrs. Mason's Piles standing well for that position. *Spanish* was a good class; first a good pair, second a splendid hen and fair cock, third a grand cock but moderate hen. In *Cochins* first and third were Buffs and second White, all good pens. The class was good. Dark *Brahmas* good, but Light very poor. The *Dorkings* also being unusually good. In *Polands* the cup was awarded to Golden, the second and third going to Silvers. *Hamburghs* were good throughout, and the winners well placed, the cup going to Gold-spangles. The *French* classes were only moderate. *Bantams*, Black Red, were first a grand cock but poor hen with white ears; second a good pen, and third moderate. Pen 168 contained the best hen in the Show. In Brown Reds the first was an error, the second being at least equal in the hen, was much better in head, eye, breast, and colour of the cock; third also being a smart pen. In Any other colour Duckwings were first, these being little gems; second Piles, the cock good but hen poor; the third were Duckwings. In Single cocks, first was a Black Red good in all points but tail, which is far too heavy, the cup was awarded here; the second and third Piles, good in style, but a little short of colour on the wing ends. Black Bantams were a good class, the winners small and neat. In the next class Silver Sebrights were first, White second, and Silvers third. A pen of handsome Sultans were placed first in the Variety class, Silkies being second and third.

In *Ducks*, Rouens were good and well placed, Aylesburys being good but not numerous. In the Variety class Mr. Walker's Chilian Teal were a grand pair, in fact the class was good; the second being Mandarins, and third Whistlers.

Pigeons were a heavy entry, many new classes having been offered, a cup for the best pen in the Show being awarded to Mr. Horner's Dun Carrier cock, the cup for Antwerps being won by Mr. Entwisle with a well-shown Short-faced Silver Dun, while a cup for the most successful winner of money prizes, given by Mr. Horner, was won by that gentleman himself. Pouters were first on the list, all the winners being Blues, good in all points, and placed in a good position they showed to great advantage. Carriers were—first and third Duns, and second Black. In Barbs the first was a Dun hen not in the best order, second a Red, and third Black. Jacobins were won by the same exhibitors with good Reds. In Dragoons the first was a Silver a little too spindly, second a better Red, and third a good Blue hen. Pen 335, a grand hen, might have been placed with justice. In Short-faced Tumblers the winners were all Almonds, Mr. Yardley's bird being first; second a fair bird, but too dark in tail; and third a rich bird, but muddy and indistinct in spangling. Long-faced Tumblers were a small class, but the Baldpates were good, though the awards in two cases were made to Mottles. Fantails did not strike us as anything extra as a class, but the Turbits were very good; first a Silver, second Red, and third Yellow. Trumpeters were all of the foreign kind, immense in rose and shell, but poor in foot-feather. English Owls were a large class, but not so good as we expected to see, though the winners were good; the first and third Silvers, and second Blue. In Foreign Owls the winners were White, good and well placed. In Magpies, first Red, second Yellow, and third Black; a very good class. In six classes of Antwerps were eighty-one entries—a show in itself in fact, and the quality almost a puzzle for any judge, the classes being divided into cocks and hens of the three varieties—viz., Short-faced, Medium, and Long. In Short-faced cocks the winners were Dun, the first in fine bloom; several other birds also good, but the hens of that variety were poor as compared with the cocks. Long-faced cocks were a grand class, the winners Red Chequers, and all from one exhibitor. Medium-faced cocks were also good, but some birds shown were really Long-faces, but the first was well placed on a Silver Dun of great beauty and quite young, the second and third being Red Chequers. In Long-faced hens again the winners were Red Chequers and very good, though the first was a little short of colour. In Medium-faced hens first and third were Red Chequers, and second Dun; all very good. Swallows were a good class. The first, a Red, was well placed, being a perfect bird; the second a Yellow, and third also a Red. In Archangels Mr. Vander Meersch won with ease, yet the class was good. One of the finest Runts we have seen for some time was placed first in the Variety class, the second going to a nice Pigmy Pouter, and third to a good Nun. The Selling class was poor in all respects.

Rabbits were not a large entry, although there were four classes. In Lops the first went to a Grey-and-white doe of nice style, 22 by 4¾; second to a Fawn doe, 21½ by 4¾, in nice order; and third to 21½ by 4¾. Pen 575, a Tortoiseshell buck, was about the best styled Rabbit shown, good in colour and fine in condition. Angoras were good and well placed, as also the Himalayans, the winners being very good in points. In the Variety class the first was a Silver-Grey, which is so well known as to need no comment; the second, a Silver-Grey, was a little dark on the head; the third being a Tortoiseshell Dutch, large, but well marked.

GAME.—*Black Red.*—1 and Cup, E. Aykroyd, Eccleshill. 2, R. Hemmingway, Shelf. 3, W. Spencer, Haworth. *Brown Red.*—1, E. Aykroyd. 2, W. Ormerod, Walsden, Todmorden. 3, J. Cock, Worcester. *Duckwing Game.*—1, E. Aykroyd. 2, E. Winwood, Worcester. 3, W. Spencer. *Any other colour.*—1 and 2, H. C. and W. J. Mason, Birstal. 3, R. Walker, Gomersal.

GAME.—*Red.—Cock.*—1, E. Aykroyd. 2, H. E. Martin, Sculthorpe, Fakenham. 3, A. Clayton, Allerton, Bradford. *Hen.*—1 and 2, E. Aykroyd. 3, W. Ormerod. *hc*, H. E. Martin.

GAME.—*Any other variety.—Cock.*—1, H. C. & W. J. Mason. 2, E. Aykroyd 3, J. A. & H. H. Staveley, Tibthorpe. *Hen.*—1, E. K. Fox, Clayton Heights. 2, E. Aykroyd. 3, E. Winwood,

SPANISH.—1, H. Beldon, Goitstock. 2, R. Newbitt, Epworth. 3, T. Holt, Bradford. *hc*, H. Beldon (2); J. Holt, Bradford.

COCHINS.—1, J. Walker, Spring Mount, Rochdale. 2, H. Beldon. 3, Mrs. Allsopp, Worcester. *hc*, E. Winwood; T. H. Readman, Whitby. *c*, R. H. Feltoe, York.

BRAHMA POOTRAS.—*Dark.*—2, C. Holt, Rochdale. 3, J. F. Smith, Sheffield. *hc*, J. Walker, Rochdale. *c*, E. Williams, Sharrow, Ripon. *Light.*—1, R. E. Horsfall, Liverpool. 2, S. Lucas, Hitchin. 3, H. Beldon.

DOSKINGS.—1, J. Walker, Rochdale. 2, J. Newton, Silsden. 3, W. H. King, Sandfield, Rochdale. *hc*, J. Newall; W. Harvey Sheffield.

POLANDS.—Cup, 1, 2, and 3, H. Beldon. *hc*, T. Dean, Keighley.

HAMBURGHS.—*Golden-spangled.*—1, Cup, and *hc*, J. Rollinson, Lindley. 2, T. Dean. 3, H. Beldon. *Silver-spangled.*—1, 2, and 3, H. Beldon.

HAMBURGHS.—*Golden pencilled.*—1, 2, and 3, H. Beldon. *hc*, C. Judson, Peckham. *Silver-pencilled.*—1, 2, and *hc*, H. Beldon. 3, T. Hanson, Keighley.

HAMBURGHS.—*Black*—1, 2, and 3, H. Beldon. *hc*, C. Taylor, Gilstead. *c*, T. W. Holmes, Baildon (2).

HOUDANS.—1 and 3, H. Grant, Bradford. 2, R. A. Boissier.

FRENCH.—*Any other variety.*—1, B. Grant. 2, Mrs. J. Wicks, Appleby, Brigg. 3, C. M. Sannders.

GAME BANTAMS.—*Black Reds.*—1, A. Sogden, Cleckheaton. 2, F. Steel, Hipperholme. 3, J. Rushworth, Keighley. *hc*, W. F. Entwisle, Westfield, Bradford; E. Jennings, Stanningley; W. Adams, St. Clements, Ipswich; J. Rollinson; R. Frew, Kirkcaldy. *Brown Red.*—1, F. Steel. 2, W. F. Entwisle. 3, E. Jennings. *hc*, F. Steel; W. F. Entwisle. *c*, R. Frew; F. Steel.

BANTAMS.—*Any other colour.*—1, R. Newbitt, Epworth. 2 and 3, F. Steel. *hc*, J. Wright, Wibsey.

GAME BANTAMS.—*Cock.*—1 and Cup, J. Blamires, Great Horton. 2 and 3, F. Steel. *hc*, E. Jennings. *c*, Wells & Sherwin, Ripon.

BANTAMS.—*Black*—1 and 2, H. Beldon. 3, Milner & Beanland, Keighley. *hc*, J. H. Cartwright, Willington; A. G. Mitchell, Bishop Auckland. *c*, W. H. Young, Driffield; R. Frew. *Any other variety.*—1, A. Silvester. 2, H. Beldon. 3, R. Frew. *hc*, R. A. Boissier; R. Frew; T. Crepper, Bacnp.

ANY OTHER VARIETY.—1, B. Beldon. 2, S. P. Ashley, Otley.

DUCKS.—*Rouen.*—1, J. Walker, Rochdale. 2, J. Newton. 3, F. Snell, Barrowden. *hc*, W. H. Rawson, jun.; F. G. S. Rawson, Thorpe, Halifax. *Aylesbury.*—1, E. Snell. 2, C. Holt. 3, J. Walker. *Any other variety.*—1 and 3, J. Walker. 2, A. Silvester. *hc*, H. B. Smith (2).

SELLING CLASS.—1, T. Holt, Bradford. 2, W. Lawson, Beamsley. 3, H. Grant, Bradford. *hc*, A. W. Dear; F. G. S. Rawson (2); S. Ackroyd, Undercliffe; R. Newbitt, Epworth; T. Calvert; C. Carr, Wilsden, Bingley; J. Naylor, Goodley, Keighley; H. Beldon. *c*, P. C. Bedlington, Whitby; H. Pawson, Burley-in-Wharfedale.

GEESE.—1, J. Walker. 2, F. G. S. Rawson. 3, E. Snell.

PIGEONS.

POUTERS.—1, W. Harvey, Sheffield. 2 and 3, W. Nottage, Northampton. *hc*, H. Yardley, Birmingham; F. Seanor, Leeds; E. Horner, Harewood.

CARRIERS.—Cup, 1, 2 and *hc*, E. Horner. 3, H. Yardley. *c*, J. Holden, Wibsey Slack.

BARBS.—1 and 2, W. Harvey. 3, H. Yardley. *hc*, J. Thresh, Bradford; E. Horner (2). *c*, H. Yardley.

JACOBINS.—1, 2, and 3, T. Holt. *hc*, W. Harvey; A. A. Vander Meersch; E. Horner. *c*, Wells & Sherwin; T. Holt.

DRAGOONS.—1, Cockitt & Sunderland, Great Horton. 2, Wells & Sherwin. 3, Ward & Rhodes, Otley. *hc*, H. Yardley (2); J. Shaw; G. Lister, Harewood; Ward & Rhodes (2); J. W. Mills; J. Stuttard, Colne (2); J. E. Crossley, Halifax; R. Woods, Mansfield; E. Horner.

TUMBLERS.—*Short-faced.*—1, H. Yardley. 2, Wells & Sherwin; E. Horner. 3, A. Silvester. *hc*, H. Yardley; E. Horner. *c*, H. Yardley. *Long faced.*—1, E. Horner. 3, A. Silvester. *hc*, F. Seanor.

FANTAILS.—2, S. Lawson, Preston. 3, H. Yardley. *hc*, W. C. Dawson; H. Yardley; E. Horner.

TURBITS.—1, H. Yardley. 2, F. Seanor. 3, W. Harvey. *hc*, F. Seanor; E. Horner. *c*, E. Horner.

TRUMPETERS.—1 and 3, W. Harvey. 2 and *vhc*, A. A. Vander Meersch. *hc*, F. Steel; E. Horner.

OWLS.—*English.*—1 and 2, Ward & Rhodes. 3, A. H. Jnbb, Halifax. *hc*, A. H. Jnbb; J. Thresh; J. Ingham, Halifax; F. Seanor. *Foreign*—1, A. A. Vander Meersch. 2, W. C. Dawson. 3, S. Lawson, Preston. *hc*, F. Steel; F. Seanor; E. Horner.

MAGPIES.—1, F. Sabbage, Northampton. 2, J. E. Crofts. 3, W. C. Dawson. *hc*, H. Yardley; E. Horner. *c*, E. Horner.

ANTWERPS.—*Short-faced*—*Cock.*—1 and Cup, W. F. Entwisle. 2, J. Lister. 3, W. Ellis, Idle. *hc*, J. Lister; J. Shaw, Otley; E. Horner. *Hen.*—1, W. Ellis. 2, D. J. Whiteley, Otley. 3, J. Lister. *hc*, W. F. Entwisle; F. Eastwood, Littleborough; C. & E. Banks, Bradford.

ANTWERPS.—*Long faced.*—Cock—1, 2, and 3, H. Jennings, Allerton, Bradford. *hc*, W. F. Entwisle; Cockitt & Sunderland; W. Ellis (2). *Hen.*—1, Cockitt and Sunderland. 2, W. Ellis. 3, J. Bastow. *vhc*, W. Ellis; H. Jennings (2).

ANTWERPS.—*Medium-faced.*—*Cock.*—1, J. Holden. 2, J. Bastow, Keighley. 3, W. Wright, Woodhouse. *Hen.*—1, J. Lister. 2, H. Jennings. 3, Tordoff and Wilkinson, Wibsey. *hc*, W. Ellis (2); H. Jennings.

SWALLOW.—1, F. Seanor. 2, E. Horner. 3, H. Yardley. *hc*, F. Seanor; A. A. Vander Meersch.

ARCHANGELS.—1 and 2, A. A. Vander Meersch. 3, E. Horner.

ANY OTHER VARIETY.—1, W. C. Dawson. 2, A. Silvester. 3, A. A. Vander Meersch. *vhc*, F. Seanor; A. Silvester. *hc*, H. Yardley; F. Seanor.

SELLING CLASS.—1, W. Ellis. 2, J. Holden. 3, F. Seanor. *vhc*, E. Horner. *hc*, H. Yardley; A. A. Vander Meersch. *c*, J. W. Mills.

RABBITS.

LONG-EARED.—1, A. Hudson, Hull. 2, T. & E. J. Fell, Blackburn. 3, L. E. & W. Miller. *hc*, J. Moore, Keighley; J. Wharton, York; T. & E. J. Fell; A. Robson, Morton-on-Swale; G. S. Burton, Beeston Hill.

ANGORAS.—1, A. Atkinson, Huddersfield. 2, T. A. James, Northampton. 3, J. Hallas, Huddersfield. *hc*, J. S. Wealey, Wetherby; R. A. Boissier, Penshurst; A. Woodall, Netherton, Dudley.

HIMALAYAN.—1, W. Hey, Rochdale. 2, G. S. Burton. 3, A. Atkinson. *hc*, T. P. Peacock, Leeds; W. T. Millet, Liverpool; J. Hallas.

ANY OTHER VARIETY.—1, A. Hudson, Hull. 2, E. Stubbs, Pinchbeck, Spalding. 3, F. Sabbage. *hc*, F. Sabbage; Found & Chappell, Westhorough, Dewsbury; J. Hallas. *c*, J. E. Pilgrim, Hinckley; A. J. Roberts, Hereford.

JUDGES.—*Poultry:* Mr. James Dixon, Clayton, Bradford; Mr. John Martin, Baschurch, Salop. *Pigeons and Rabbits:* Mr. W. Cannan, Bradford.

RUSSIAN TRUMPETERS.

"WILTSHIRE RECTOR" has evidently made up his mind that the climate of Great Britain does not agree with the Russian Trumpeters, and is the cause of the difficulty that his friends have found in breeding them. In this I think he is quite mistaken. In my opinion the cause is only that the birds are very much in-bred; and every breeder of experience of short-horns, racehorses, or in short any high-bred stock, knows that the result of close breeding (and all highly-bred animals are more or less in-bred) is increased difficulty in rearing the young stock and occasional sterility of individuals. Also, as Mr. Huie remarks, useless and barren birds are more likely to be disposed of than good stock birds.

I have not the slightest doubt that with patience and a very slight introduction of fresh blood they will breed as satisfactorily as any other high-class variety, more particularly if they are taken in hand by fanciers who are experienced breeders, and who will not show them to death as most of their present owners seem to be doing.—JOHN H. HUTCHINSON.

ENGLISH OWLS.

I MUST ask you to give me a little space for a final word on this subject. Mr. Lyell quotes Euclid, but I fear still his reasoning is not correct. I pointed out to Mr. Lyell the mistake of Mayor in ascribing carelessly to Moore words the latter never wrote. Mayor made a mistake, Mr. Lyell quoted that mistake; both erred from inaccuracy. There, I think, Mr. Lyell should have left the matter, for, a mistake pointed out, its correction ought quietly to be accepted or frankly owned. But Mr. Lyell argues further, saying, "I do not consider Mayor wrong in his quotation about the size of the Owl, for although it is the size of the Turbit that Moore gives as little larger than the Jacobin, he immediately afterwards in the few words devoted to the Owl says, 'This Pigeon is in make and shape like the former (the Turbit). Things equal to the same thing are equal to each other.'" But "make and shape" have nothing definitely to do with size. A little man may be in make and shape like a large man—*e.g.*, he has wide shoulders, or short legs, or a round chest, which may put others in mind of the make and shape of a large man. "He reminds me of So-and-so; he is the same make and shape," anyone may say. A dwarf may in make and shape resemble a giant, being in miniature what the other is in vastness, and the opposite.

Mr. Lyell objects to my theory of climate influencing size; but the Scotch Fantails, smaller than the English, came, I was told, originally from India. This confirms my view. Returning to size, we pretty well know that an Almond Tumbler of olden days was a coarse bird, at least would be so considered now, and even if it had been stated one hundred years since that the Owl was as small as an Almond Tumbler, yet that would not to our ideas be very small. This I see is very well put last week by T. G. Sprunt.

Finally, I will never be a party to writing down the fine-looking, well-flying, bold English Owl. Size, colour, and appearance mark him out as different to the foreign bird, and make its preservation as important to the fancy, particularly the reading part of the fancy, not the "prize-fancier," as any of the older varieties of Pigeons.—WILTSHIRE RECTOR.

MR. DEAN WOLSTENHOLME.

TWENTY-THREE years ago, or in 1852, Mr. Eaton published a set of six matchless engraved coloured portraits, life size, by Wolstenholme—viz., the Almond, Black Mottle, Red Baldhead, Yellow Beard Tumblers, Black Carrier, and Blue-pied English Pouter, and in 1860 he brought out an additional set of six Toy Pigeons—viz., the Barb, Trumpeter, Turbit, Owl, Fantail, and Jacobin, which were also by Mr. Wolstenholme. "As Pigeons matchless," Eaton used to say, and certainly the Carrier has not been beaten by any other picture either before or since; nor has the Almond of the set of six, nor the small one published first in Eaton's "Almond Tumbler" in 1857. Going back still farther I find portraits of bull dogs, and published by Dean Wolstenholme, 6th August, 1834. I find a picture in the Royal Academy catalogue of 1818. It is No. 83 "Portrait of Beach, a favourite bull bitch, bred at Abergavenny, the property of a gentleman, by Dean Wolstenholme, jun.

Mr. Wolstenholme is now seventy-seven years of age, having been born at Waltham Abbey in 1798. He is still painting, and those who, like myself, value pictures connected with their hobbies, in him may meet with one who is able and willing to paint portraits of Pigeons or dogs. He has lately done two for me that are very first-rate indeed. His address is North Hill, Highgate.—J. C. LYELL.

BRITISH BEE-KEEPERS' ASSOCIATION.—This Association held a conversazione in the rooms of the Linnean Society at Burlington House on Wednesday the 5th inst. About seventy ladies and gentlemen were present, and spent an enjoyable evening discussing apiarian matters, and inspecting and criticising the various objects of interest brought for exhibition, among which appeared an ingenious frame-making machine, and a novelty in the shape of liquid wax for cementing on guide combs. Several first-class microscopes with objects living and dead also provided

a share of instructive amusement. The circulation in the larva of the drone bee was exhibited by a member present.

WINTER EXPERIENCE AMONG BEES.

We observe among inquiries addressed to this Journal none more common than those of hapless bee-keepers who have unaccountably either lost altogether the population of hives which were strong in the autumn, or found them so weakened in numbers as to stand a poor chance even of recovery. Your chiefs in the apiarian department are asked to account for accidents of this sort, but too often no satisfactory answer can be given, not merely because a personal diagnosis of the particular case is impossible, without which all attempts at explanation must be more or less guesses in the dark, but because also some of the ills that afflict our apiaries are quite beyond our knowledge and skill to account for.

In my own experience this winter I have been sorely puzzled to explain why two of my best-supplied and most vigorous stocks have been weakened by a most disastrous mortality. In the case of one which had plenty of honey, so great has been the loss of bees, thousands of which I had thrice to remove from the floorboard during the months of February and March, that I thought it gone beyond recovery. The comb and hive (of wood) were perfectly dry and healthy, nor were there any signs of dysentery or other visible disease. I can only suppose that from indolence they allowed themselves to die in the midst of plenty, not having transferred from the sealed honeycombs to their central retreats sufficient food to keep them alive during the prolonged periodic returns of cold or ungenial weather which we had during those months. Those hives I thought absolutely safe, and guessed at every conceivable reason but that which I now believe to be the probable one, till it was too late to save my lamented thousands. The hives are now recovering population, but I can expect little from them this year in the shape of increase. I am now feeding, as they can spare so few for honey-gathering.

All my other stocks save one had been diligently fed quite up to November, and were overflowing with food in the open cells. In the case of none of them was there any extraordinary mortality at the time, or since the above-mentioned were suffering. In fact, I never saw so little damp in any previous winter. Nevertheless my bees are quite a month behind time, even the best of them, owing to the extraordinary dullness and coldness of the weather throughout February and the early weeks of March. And we are now in the full enjoyment of spring with a wonderful display of blossom in our meadows and orchards. Happy they who have strong hives to benefit by it.—B. & W.

ENGLISH AND LIGURIAN BEES.

Much has been written about testing the merits, as honey-gatherers, of the English bee with the Italian Alp or Ligurian bee. This may be very well, but I think scarcely necessary to make a public trial of it. Any bee-keeper individually who keeps both kinds can make the proposed trial for himself privately with far more satisfaction than any public trial would be.

Why need there be this difference of opinion as regards their merits. If anyone does not, or cares not, to keep Italians, why try to write them down? If their colour and beauty are an attraction to some people, independently of their character as workers, by all means let them enjoy them for that. While I cultivate bees for either profit or pleasure I hope to find a place for both kinds. I have yet to learn they are inferior to the English as honey-collectors; in fact, I believe their merits are so evenly balanced that there is nothing to choose between them.—C. F. C., *Hinckley*.

A story is told of a negro in Virginia whose master threatened to give him a flogging if he boiled his eggs hard again. "You rascal!" shouted the enraged planter, "didn't I tell you to cook those eggs soft?" "Yes, massa," said the frightened slave, "an' I got up at two o'clock dis morning, an' biled dem five hours, an' it seems to me I never kin get dese eggs softer.

OUR LETTER BOX.

Dari for Fowls.—Colvile Browne will be glad to hear the opinions of any poultry owners as to the value of "dari" as a food for laying fowls in a confined situation.

Parrot Self-plucked (*D. Judd*).—The only food to be omitted in your Parrot's bill-of-fare are the chilies. Give some lettuce stalks daily; also a daily bath. Put a dish filled with water for the Parrot to bathe in voluntarily, but if the bird will not do so give it a copious shower bath through the rose of a watering pot. Use tepid water.

Feeding Bees (*F. S.*).—It is unnecessary to feed bees when they are working hard ten hours a-day on the fruit trees. Three or four days of such work every week will enable the bees to provide for all the wants of their hives, and breeding will go on rapidly. If the weather change and prevent the bees from gathering honey for some days, it will be wise to give each hive about 1 lb. of sugar made into syrup weekly in small doses. By examining your hives every now and then you may easily ascertain when the bees cover all the combs of their hives. About a week after the combs are covered, nadiring or supering may be resorted to. The book you have referred to will guide you aright in this work of enlarging your hives.

Making an Artificial Swarm (*A Novice*).—Swarming artificially from bar-frame hives is usually done by taking about half the bees and combs from the stocks and placing them in empty hives, not caring much whether the queens go from or remain with the mother hives. As you ask which is the best way of artificial swarming from such hives, we may remind you that in natural swarming the old queens go with swarms, and it is well for the bee-master to follow as near as possible the natural process. Natural swarms go without combs, and it will become a question at some future time whether it is good or bad policy to break up the interior of hives for the sake of placing a few old combs in new hives with young swarms. When your hive is ready for swarming you may remove one bar of worker comb with the queen and about half the bees from it, and put them into another bar-frame hive. If you remove more bars the old hive would be more injured than the new one would be benefited. Indeed, we are of opinion that the best way is to drive a swarm with the queen into an empty hive, and let them fill it with young combs. In prospect of breeding young queens bees invariably build too much drone combs. Empty bars in old and new hives would naturally be filled with too much drone comb while the bees are rearing young queens. If you do not place the old and new hive some feet to the right and left of old stand, place the swarm on it, for the bees more readily enter the old hive.

Hives (*C. G. M.*).—Any one of the dealers in hives who advertise in our columns could supply you.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.
Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. May.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg	deg.		deg.	deg	deg.	deg.	deg.	In.
We. 5	29 942	54.8	52 9	N.N.E.	51.9	69.3	45 8	112.4	41.3	—
Th. 6	29 805	58 9	53.9	S.	52.9	67.3	49.9	117.0	45.6	0.194
Fri. 7	29 587	59 8	49 6	S.	53 0	57.2	47.0	73.5	45.2	0.899
Sat. 8	29 861	57.0	55 8	W.	52.1	63.2	50 8	94 2	48 1	0.695
Sun. 9	29 881	60.3	53.6	W.	52.4	66.7	48 2	111.7	44 0	—
Mo. 10	30.122	58.0	52 4	W.	52.9	67.2	48 6	120 1	45 9	—
Tu. 11	30 423	55.3	48.1	W.	53.8	68.1	42 8	113.0	40.0	—
Means	29.953	56.4	52.3		52.7	65.6	47.4	105.6	44 8	0.692

REMARKS.

5th.—Very hazy at 5 A.M., but clear at 8, and a very fine day.
6th.—Fine morning, rather stormlike at noon, but on the whole a very pleasant day.
7th.—Rain all the morning, fine afternoon, but rain again in the evening.
8th.—Very fine early, but wet morning and night; fine for an hour or two in the afternoon.
9th.—Very bright early, moderately so at 9 A.M., fine by 10, and all day
10th.—Another very bright pleasant day. [bright and pleasant.
11th.—Rather cloudy about 9 A.M., but soon clearing off, and being a very fine day, lunar corona at 9 P.M.

Fine and pleasant week. Temperature much the same as in the previous week, but the nights warmer.—G. J. Symons.

COVENT GARDEN MARKET.—May 12.

A good supply and fair attendance in both Markets. French goods very plentiful, including Cherries and Apricots. Asparagus is quite abundant, both English and Foreign. Another cargo of St. Michael Pines is reported at the wharf, and will be disposed of this week by auction. Lisbon and Maltese Potatoes maintain last week's rates.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	2	6	to 3	6	Mulberries lb.	0	0	to 0	0
Apricots dozen	0	0	0	0	Nectarines dozen	0	0	0	0
Cherries box	4	0	7	0	Oranges ℔ 100	5	0	14	0
Chestnuts bushel	10	0	20	0	Peaches dozen	15	0	24	0
Currants ½ sieve	0	0	0	0	Pears, kitchen dozen	2	0	8	0
Black do.	0	0	0	0	dessert dozen	8	0	12	0
Figs dozen	8	0	12	0	Pine Apples lb.	4	0	8	0
Filberts lb.	0	0	0	0	Plums ½ sieve	0	0	0	0
Cobs lb.	0	0	2	0	Quinces dozen	0	0	0	0
Gooseberries quart	1	0	2	0	Raspberries lb.	0	0	0	0
Grapes, hothouse lb.	6	0	12	0	Strawberries lb.	6	0	16	0
Lemons ℔ 100	8	0	12	0	Walnuts bushel	8	0	12	0
Melons each	6	0	10	0	ditto ℔ 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes dozen	3	0	to 6	0	Leeks bunch	0	4	to 0	0
Asparagus ℔ 100	3	0	6	0	Lettuce dozen	1	0	2	0
French bundle	2	0	10	0	Musbrooms pottle	0	9	2	0
Beans, Kidney ℔ 100	2	0	0	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	0	0	0	0	Onions bushel	4	0	8	0
Beet, Red dozen	1	0	3	0	pickling quart	0	6	0	0
Broccoli bundle	0	9	1	6	Parsley doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	0	0	0	0	Parsnips .. dozen	0	9	1	0
Cabbage dozen	2	0	8	0	Peas quart	2	0	4	0
Carrots bunch	0	6	0	8	Potatoes bushel	2	6	6	0
Capsicums ℔ 100	0	0	0	0	Kidney do.	3	0	6	0
Cauliflower dozen	4	0	8	0	Radishes.. doz. bunches	1	0	1	6
Celery bundle	1	6	2	0	Rhubarb bundle	0	4	0	9
Coleworts.. doz. bunches	4	0	6	0	Salsafy bundle	1	6	0	0
Cucumbers each	0	6	1	6	Scorzonera bundle	1	0	0	0
pickling dozen	0		0	0	Seakale basket	1	0	1	6
Endive dozen	2	0	0	0	Shallots lb.	0	3	0	4
Fennel bunch	0	3	0	0	Spinach bushel	0	0	4	0
Garlic lb.	0	6	0	0	Tomatoes dozen	6	0	0	0
Herbs bunch	0	3	0	0	Turnips bushel	0	6	0	0
Horseradish bundle	0	0	4	0	Vegetable Marrows..doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	MAY 20—26, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. h.	m.	Sun Sets. h.	m.	Moon Rises. h.	m.	Moon Sets. h.	m.	Moon's Age. Days.	Clock after Sun. h.	m.	Day of Year.
20	Th	Royal Horticultural Society of Ireland—Early Summer	66.9	43.4	55.2	3 af	4	49 af	7	41 af	8	34	3	●	3	44	140
21	F	Royal Institution at 8 P.M. [Exhibition.	66.3	44.7	55.5	2	4	51	7	52	9	58	3	16	3	37	141
22	S	Royal Botanic Society at 3.45 P.M.	65.4	42.4	53.9	1	4	52	7	53	10	31	4	17	3	32	142
23	Sun	TRINITY SUNDAY.	67.3	43 6	55.5	59	3	54	7	42	11	17	5	18	3	27	143
24	M	Linnæan Society (Anniversary) at 3 P.M.	67.4	43 0	55.2	58	3	55	7	morn.		16	6	19	3	22	144
25	Tu	Royal Medical and Chirurgical Society at 8.30 P.M.	65.4	42.9	54.2	57	3	56	7	18	0	27	7	20	3	16	145
26	W	Royal Botanic Society—Summer Exhibition.	67.4	42.8	55.1	56	3	57	7	45	0	46	8	21	3	9	146

From observations taken near London during forty-three years, the average day temperature of the week is 66.6°; and its night temperature 53.3°.

FLOWERING PLANTS FOR HALLS AND CORRIDORS.

HALLS and corridors are not as a rule the best places for plants to thrive in, but nevertheless there is an increasing demand for plants for such places. No proprietor once having his mansion well furnished with flowering plants through the autumn and winter is ever willing afterwards to be without them. He finds that his paintings, his china, and his furniture, be they ever so valuable, do not light up the faces and bring forth the hearty admiration of the majority of his visitors as do the flowers. You must know who is supposed to have employed his pencil on the canvas before you dare admire it as a painting; you must turn a china cup upside down and look at the bottom of it before you can venture to say the top is beautiful, for these things are not judged according to merit, as many would fondly suppose. People who wish to have the credit of possessing a cultivated and refined taste are obliged apparently to admire very often that which, if they asked themselves the plain truth, they can see no beauty whatever in. What a relief, then, to turn to the flowers! All flowers are beautiful, and everybody is supposed to be a judge of them. It is safe even to admire the most hideous combinations of flowers, for there is such an immense margin left here for differences of taste. I have seen hosts of lords and ladies in raptures over those ugly faggots of cut flowers exhibited at our country shows under the names of bouquets and floral designs, and their taste, of course, was never called into question.

By-the-by, how is it that while there is such an immense improvement in vases and epergnes at our country exhibitions, there is little or no improvement in bouquets and nosegays? Is it because the judges are too exclusively local men, and encourage too much their own particular fancies? We meet with different models in different towns and villages, but all the exhibitors in each village appear to have received their lessons in floral decorations in the same school.

To furnish a mansion well and economically with flowering plants during the autumn and winter requires a considerable amount of forethought and management. It is not good policy to use rare and valuable plants for such a purpose, because they are certain to be injured, and likely enough to be killed or rendered worthless for the future. Neither is it good economy to force hard to bring plants into flower in winter when the same plants, or others equally good, if attended to during the preceding summer, would have flowered almost naturally at the time they were wanted.

Many people use principally fine-foliaged plants for house decoration, because, as a rule, they stand rough treatment better than do flowering plants; they last longer, they are easier to grow, and they are nearly always presentable. Flowering plants, on the other hand, are only presentable for a short time; a week or a fortnight in a dark corridor is generally sufficient to spoil their beauty, and there is a difficulty in keeping up a perpetual succession till one gains experience in the work; but in my opinion flowering plants are much more enjoyable in dark cold weather than are foliage plants. There is a refreshing appearance about fine-foliaged plants in the heat of summer; but for dark, damp, chilly autumn give me bright flowers, as they contribute an enlivening effect to which foliage, however fine, can have no real claim.

The difficulties of keeping up a succession of flowering plants are not so great as might appear, but there must be method and arrangement in preparing them. You may grow plants by thousands and then fail if you do not make your arrangements six or twelve months beforehand. It will not do to grow a plant merely because it is beautiful. If it is not suitable for your purpose summon up courage and put it aside, and then utilise the room by growing something more useful, although less beautiful. Many gardeners fail by attempting to do too much. The right course is to find out the special requirements of a place, throw your old loves and special hobbies clean overboard as if they were your greatest enemies, and then take your employer's hobbies and make them your own with all your heart.

I find the simplest way to keep the mansion furnished with plants is to grow but few sorts, and a large quantity of each sort, also those which are of comparative easy growth, and which can be grown good enough for the purpose in one season. I can tell now what will be my principal flowering plants in each month from next August till the following May. Nothing of this kind is left to chance, and much of it is now being prepared for the purpose, consequently there is not much waste of labour or material. In August the principal plants will be—Campanula pyramidalis two varieties, Vallota purpurea forty or fifty plants probably, Lilium auratum and L. punctatum, Balsams, and Fuchsias. These are all very showy, very easily grown, and distinct from the plants in the flower beds. The plants named will form the backbone of the whole arrangement, to which will be added any little odds and ends worthy of associating with them. Campanula pyramidalis lasts good in the house for two months; it might not look so well in a small house, but in our stately apartments it is very imposing.

For the beginning of December, when we aim to have our greatest floral display, the principal plants are Poinsettia pulcherrima, Richardia æthiopica, Gesnera refulgens, Browallia elata, Epiphyllum truncatum and its varieties, Chrysanthemums two or three distinct bright colours, Dendrobium moniliforme, Begonias, Carnations above two hundred one-year-old plants in 10 and 12-inch pots (these are principally for cut flowers), Roman Hyacinths, Primulas, Cyclamens, and Cinerarias. All these flower almost naturally at this time if well grown during the summer. By the end of the month with a little forcing we have the glorious wreaths of little snowballs on the Prunus persica flore-pleno, by the side of which

Deutzia gracilis—beautiful as it is when you see nothing better—looks a dirty white.—WILLIAM TAYLOR.

LATE FIELD POTATOES.

I APPEND my experience both in growing and cooking twelve varieties of late Potatoes; the estimate of the different sorts being derived by actual practice and attentive observation may be useful to some readers. I have had them cooked at various times—from the period of taking up the crop to the present time. I note also their keeping properties, and the degrees that each was afflicted by the disease.

1. *Paterson's Victoria.*—Boils white and floury, a delicious flavour, and a great cropper. It was a little diseased at taking-up time; went no worse as the season advanced. It is a good old variety.

2. *Paterson's Improved Victoria.*—Cooks very white and floury, and is of excellent flavour. It keeps its colour well after being cooked. This is certainly an improvement on the old variety.

3. *Bresee's Prolific.*—Boils white and floury, and of delicate flavour; is a heavy cropper, large and handsome, with tubers of a uniform size. It is one of the best old American varieties, and will retain its character for many years to come as a second early; it was almost free from the disease.

4. *Ashtop Fluke Kidney.*—Cooks white and floury, and is of rich flavour. It is not much of a cropper, being more adapted for a garden, as the haulm is very compact and dwarf.

5. *Red Regent.*—Cooks yellow; pretty good in flavour, and mealy; not much diseased. A good hardy field variety.

6. *White Fluke.*—Boils as white as snow, and floury; it keeps its colour well after being cooked; it is very productive, and but little diseased.

7. *Red Fluke.*—Cooks white, and very floury; a delicious flavour, an abundant cropper, but a good many diseased; it keeps well until late in the season.

8. *Falara.*—Boils white and floury, excellent in flavour, keeps its colour well after being cooked, and is a heavy cropper. It is an excellent field variety, hardy, and very little affected by the disease. My employer is now using it (middle of April) in the house, and it comes to table in fine condition.

9. *Paterson's Albert.*—Cooks as white as snow, is very mealy, and keeps its colour well; it is an immense cropper, almost free from disease; it keeps its colour well after being cooked. It is a good keeper, and cooks as well now as it did the beginning of the year. It will be more extensively grown when better known.

10. *Sutton's Red-skinned Flourball.*—Boils very white and floury, is excellent in flavour, and improves by keeping until now (8th of May); we are using them every day. It is an enormous cropper, proof against the disease, tubers nearly of a uniform size—large, and good for baking.

11. *Late Rose.*—Cooks as white as snow, and very mealy; is of a rich flavour, coming to table in fine condition, and very little diseased. It cooks much better now (middle of April) than at taking-up time. It is one of the finest American late varieties yet sent out.

12. *Sutton's Hundredfold Fluke.*—Boils white and floury, and is of fine flavour. It is one of the very best late varieties at this season of the year. At taking-up time it boiled very close and waxy, but was still good in flavour. It is an enormous cropper, and free from disease.—W. MCPHERSON, *The Gardens, Snelston Hall.*

PROPAGATING COPROSMA BAUERIANA VARIEGATA.

THE above plant being considered by some rather difficult to strike, perhaps the following remarks as to how we have struck a large batch this spring may be useful to those who desire to increase their stock and have not succeeded. We lifted our old plants from the flower garden late last October, potted them, and put them in a close frame until established, then wintered them in a cool fruit house, and placed them in a temperature of about 60° in February for a fortnight before taking off the cuttings.

We use shallow saucers for these and all softwooded bedding plants, except Geraniums, in spring propagation; our present stock was what are commonly used for Strawberry forcing, with a hole in the centre for drainage. The compost used is the ordinary one of loam, leaf soil, and sand. We dibble about thirty cuttings in a pan, and out of a large batch put in thus and plunged to the rim in a bottom heat of about 80° in an ordinary lean-to pit, not 10 per cent. missed, being fit to pot off in a month. We find autumn propagation does not succeed.

The Coprosma is in its best dress in the dull wet days of autumn, and may be left out until November. A few large plants lifted and wintered as above will furnish many cuttings in spring after having been turned to account for room and general decorative purposes in the winter.—H. J. C., *Grimston.*

HOLLY BERRIES FOR CHRISTMAS.

PERHAPS at this season of the year the Holly is seldom thought of, but as the festive season of Christmas draws near its berries are in great request, and but few homes are then considered furnished without the Holly and Mistletoe. These berries are prized from the palace down to the cottage, but of late years there has been a great scarcity of Holly berries. I think this is a subject worth inquiring into at the present time, for this is the month when the Holly is usually in bloom.

My opinion is that if we could pay more attention to the Holly at the time of its blooming and fruit-swelling period we should find more Holly berries in the right places, and at the time they are especially coveted.

It is often a disappointment to have fine Holly bushes but no fruit, for everyone will admit they are of great beauty when well laden with brilliant berries. It is well known that the Holly is a very thirsty shrub and a gross feeder, and when in active growth will absorb large supplies of water. I think I shall be able to show that the scarcity of Holly berries, in many instances, has been caused by dryness at the roots during the summer months. My remarks apply chiefly to Hollies grown on hot sandy soils with a gravelly subsoil. On such soils, where Holly berries are in request, they will well repay a little extra attention. This is not mere theory, but is proved from actual practice.

Last year I tried the experiment on eight pyramidal Hollies of the gold and silver Queen varieties. The watering was commenced when they were in bloom and continued through the summer months, the plants being watered about twice a-week, not in mere dribblets, but they were given thorough soakings. These Hollies were planted on grass, but not grassed quite up to the stems, but instead were dressed with well-rotted manure, and a sprinkling of soil put on the top to prevent drying and to produce a neat appearance. The frequent waterings on the surface washed down the manure to the roots. It is astonishing what a little manure will do applied as I have stated; but where it is not practicable to apply manure in a solid state, liquid manure may be used with advantage, but not given in too strong doses.

If there are any favourite Hollies growing on grassy mounds or on slopes, then there will be a little difficulty in applying water, but this can be overcome. I will give as an example a plant on a grassy mound. In this case have three or four flower pots of convenient size, and sink these around the tree at convenient distances, but not nearer than a foot to the stem, and not too deep, say 3 to 4 inches, the pots to be placed perfectly level, then all will be ready for the watering. As a matter of course the hole in the bottom of the pot must be open. Fill them up to the rim, and the water will then gradually filter through and find its way to the roots.

In the case of sloping banks the same plan will do with a little variation—that is, by placing the pots on the upper or higher side of the trees. If these pots are filled with water two or three times a-week during the flowering and fruiting season I think there will be no cause to complain of a little extra labour. I may mention that scores of trees that were not treated in the way described were quite barren. I have said that when solid manure cannot be applied liquid manure will be beneficial. I know some people will object to strong liquids owing to disagreeable smells, but there are many kinds of manure which are readily dissolved and leave no unpleasant odour afterwards. I know of no manure so easily applied and so effectual as guano when it can be had really good. I would add an ordinary handful to every four gallons of water; it might be applied stronger, but it is best to err on the safe side. In mixing it will be necessary to stir it well before using. Those who have the convenience to mix up larger quantities will find it less trouble. Many shrubs and plants would be benefited by such applications, such as Skimmia japonica and Pyracantha, even wall fruits and trees on dry

parched borders. The plan well carried out will result in a beautiful crop of Holly berries.

But after all the birds may enjoy the berries, for when winterly weather sets in hunger is a sharp thorn, and they will soon clear a Holly tree of its fruit. The fieldfares are very destructive to Holly berries, for coming as they do in flocks they will soon clear a tree. The Mistletoe thrush is also a very troublesome bird in sharp weather, so that those who have berries and prize them will do well to be on the look-out and protect them before it is too late. Nets will do put carefully round, but I adopted the following plan last year: I had some balls of white worsted and run it all round the heads of the trees where they were not too large. It is easily and quickly done by just twisting it round the tops of the shoots or round the leaves. This was the only thing that saved us berries for Christmas decoration.—G. R. Allis.

DIOSMA (ADENANDRA) UNIFLORA.

The Diosmas are a genus of beautiful Heath-like shrubs from the Cape of Good Hope. They are of easy culture, vary-

Fig. 93.—Diosma (Adenandra) uniflora.

ing in height of from 1 to 4 feet, are graceful, yet compact in habit, and are exceedingly floriferous. The colours of the flowers are mainly white, or white and pink; the plants afford nice sprays for cutting, which they endure without injury. Those who enjoy hardwooded greenhouse plants which do not require the nice attention and skilful management of Heaths would do well to turn to the Diosmas.

Besides being of elegant appearance by their Heath-like foliage and attractive by their multitude of star-like flowers, the plant, like other Rueworts, emit a powerful perfume. From this characteristic is their name derived—viz., from *dios*, divine, and *osme*, odour. These plants are not extensively cultivated, probably because they are less showy than the usual class of summer greenhouse plants which are now in repute, yet they possess a sober quiet beauty which should, irrespective of their perfume, entitle them to more general cultivation. They are readily propagated by cuttings in sand under a bell-glass, and do not require much heat or they will elongate instead of emit roots. When rooted they should be potted in peaty soil and be grown in a light intermediate house, duly pinching the shoots to keep the plants compact and bushy. They should be shifted-on as required, not large shifts at a time, and be potted firmly, incorporating, as the plants become large, loam and charcoal with the peat. The shoots should not be pinched after August, but the plants should then be stood in the full sun, shading the pots, to have the wood matured, and every shoot will bristle with bloom in the following spring and early summer. When the plants have flowered they should be pruned, top-dressed, and encouraged to make fresh growth to be well matured before winter. The plants may be wintered in any light structure from which frost is excluded, but it is desirable the temperature do not fall below 40°.

The more showy of the species now form new genera, Agathosma, Baryosma, Adenandra, &c., the one figured belonging to the genus last-named. It is a dwarf-growing species with pink flowers, and worthy a place in any collection of hard-wooded greenhouse plants.

POINSETTIA PULCHERRIMA.

Probably most cultivators of this brilliant winter plant have their Poinsettias freely growing now. They were shaken out some time ago, repotted, and are on shelves in some well-heated structure making rapid growth preparatory to large and highly coloured whorls of bracts to set the houses aglow at Christmas time. Where fine heads are required irrespective of length of stem the plants cannot well be started too early, provided that conveniences are at hand for growing them on without check. When started early two conditions are essential to success—the plants must have heat sufficient to keep them healthy, and light to keep them as sturdy as is consistent with their nature. Not in all places where Poinsettias are required can these conditions be found. There may be heat but not light, and as a consequence the plants become drawn. By this cause are many failures, or at the best partial successes. A stove, it may be, is provided in which to flower the plants; but this structure, being devoted to Ferns and foliage plants in the summer, requires to be shaded, and the other houses which afford the requisite heat are vineries, and their roofs are covered with foliage. But still those who have a stove in which a night temperature of 60° is kept up in winter expect to have Poinsettias, whether there is any suitable place for growing them in summer or not. Certainly a shaded stove or fernery is not suitable, neither is the vinery which is darkened by foliage. Now with these, and only these, conveniences—a shaded stove and vinery in which to prepare Poinsettias, the best plan to adopt is to defer starting the plants until late in the spring—*i.e.*, about the second week in May, and instead of growing them in shaded houses prepare the plants in light frames.

Frames usually known as "cold" are really—or may be made so—admirable miniature stoves in summer if the sun heat is carefully conserved and moisture afforded to make the atmosphere genial. These are very suitable in which to grow Poinsettias during the months of June, July, August and September. This free, healthy, unchecked growth for four months is sufficient to prepare valuable decorative plants for winter effect. They may not be large or tall, but if they are healthy, dwarf, and have heads 6 to 8 inches in diameter, they will be exceedingly useful and attractive, and for many purposes indispensable. By starting the plants late it is seen their culture is greatly simplified, and the only structures necessary are a warm house in which to bloom them in winter, and plain frames or pits in which to grow them in summer.

My first essays in Poinsettia-growing were failures. I started my plants early, and could only grow them on under the shade of Vines, and hence their growth became weak and elongated. By starting later and growing mostly in frames a fair share of success followed. I never had nicer, more useful and showy plants, than the year in which I cut the plants down on May the 20th. They were cut hard in and the plants stood in the vinery to break; when pushed half an inch they were shaken out and repotted, and kept in the vinery a week to assist them to become re-established, and were placed in cold (now sun-warmed) frames on June 22nd.

On being shaken out the plants were potted in clean pots—that is important—a size smaller than those in which they had bloomed the previous year. The soil used was equal parts of loam, peat, and leaf mould, with a free admixture of silver sand. Towards the end of July the pots were filled with active roots and the plants were shifted into their blooming pots, using soil considerably richer by substituting

cow manure for the leaf mould and diminishing the proportion of peat. In this final potting mixture lumpy charcoal was freely incorporated and the pots were well drained, for although Poinsettias require copious supplies of water, any approach to stagnancy must be avoided. The foliage will turn yellow and drop off either by drought or excessive wet; therefore both extremes must be provided against, as by losing their leaves the plants are robbed of half their beauty. In potting it is well not to fill the pots within 1½ or 2 inches of the top; and then, when the bracts, show a top-dressing of cow manure can be given, which will increase their size and colour. The routine culture in frames is attention to air and watering. In bright weather water must be used freely to supply the loss by transpiration from the large leaves. In the afternoon, at closing time, the plants should be freely sprinkled overhead. Always use tepid water. In sultry weather the removal of the lights at night is very beneficial. The plants so treated attained a height of 2 feet and perfected good heads. It is important that they be removed from the frames when the night temperature falls below 60°. Care must be taken that they are not placed suddenly in a dry atmosphere, or the foliage will inevitably turn yellow and decay. Any check to the roots by whatever cause is also a certain precursor of bad foliage, or none at all.

For dwarf plants I strike young shoots in summer. These small plants are after all the most useful. They may be had from 4 inches high to 1 foot, and are invaluable for many purposes of decoration. Propagation is also effected by the old wood somewhat after the manner of Vine eyes, but for dwarf healthy plants I have always found the striking of the young shoots the most satisfactory. The cuttings may be put in any time during the summer. If plants a foot high are wanted the end of July is a good time, and for very dwarf plants a month later will be a suitable time to take the cuttings. With due care and attention not one in twenty will fail to strike. The conditions are brisk heat, a close atmosphere, and, for a time, dense shade. For striking the cuttings a bottom heat of 90° is not too much. This may be afforded by fermenting manure, on which is placed close-fitting handlights or a frame —that is, in case no proper propagating house is at hand.

The cuttings should be selected from stout short-jointed shoots and be inserted singly in thumb pots, using light soil surfaced with pure sand. They should be laid for half an hour, or less, to dry the wound previous to being put in. For the first few days they must be densely shaded, gradually inuring them to the light. In ten days the young roots will protrude through the pots, and the plants can, after being duly prepared, be shifted into their blooming pots, having one or several plants in a pot as desired. These cuttings if well managed will not lose a single leaf, and the bracts they produce will be as fine as if the cuttings had not been severed from the plants. Long-jointed sappy growth will not strike, but select those shoots with the leaves near together, and take them off at a time when the stems have attained a dark green and become mature, and they will strike freely. Indeed few will fail.

Thus with plain homely materials and starting late may a supply of these attractive plants be had. So long as a properly heated structure is provided in which they can bloom their summer culture need not be a source of trouble. Cold frames transformed into miniature stoves by conserving the sun heat, and cuttings of the young shoots being put-in in the growing season will result in a stock of admirable plants to brighten up the dark winter months. The glowing heads will last for weeks either on the plants, or cut and inserted in moist sand for using as cut flowers in rooms.

For this plant there is no substitute, and I advise all who have the means of growing them to increase their stock by the striking of cuttings as fast as they can be obtained, still waiting until each shoot is stout and in a measure matured before it is severed from the plant; success is then certain with correct treatment and attentive care.—A Surrey Gardener.

OVERCROWDING OF PLANTS AT EXHIBITIONS.

In Mr. Tymon's notes on the Manchester Auricula Exhibition is a sentence demanding prominence at the present time. The sentence is this—"The plants looked huddled up, and it was nearly impossible to make out what plants belonged to any one exhibitor." That is an evil common to most exhibitions metropolitan and provincial, and, moreover, it is a growing evil. The good old plan of dividing collections by strips of list is being generally departed from, to the no small confusion of visitors and causing unpleasant crowding, as each examiner is often obliged to stop to count the plants, and, as well as he can, determine for himself where one collection ends and the next begins. By less crowding and clearly-defined divisional lines the groups of plants would show to better advantage, and the exhibitions would be much more enjoyable to the general public.—Ex-Exhibitor.

THE ROYAL HORTICULTURAL SOCIETY.

The present state of the affairs of the Royal Horticultural Society is most bewildering. Who could ever have imagined that a Society of so long standing, so honoured at home and abroad, and privileged with the title of "Royal," could have fallen so low as that it should be sued for the payment of the prizes it voluntarily offered and which it is unable to pay? There is a heavy responsibility resting on the shoulders of those men who were instrumental in turning out the old Council, and who came before the Fellows with bland speeches and promises which have never been fulfilled. They and their nominees now on the Council are answerable for all this, and if they have any sense of honour they will acknowledge their fault, and resign a position they never ought to have held, and which they are unable now to hold with credit to themselves and with advantage to the Society. In these remarks it must be understood that we except those gentlemen who were nominated and accepted office as representatives of horticulture, but who it is well known have been overruled and all but ignored in all the negotiations that have been carried on between the Council and the Royal Commissioners. It is true that lately since the crisis is come and their help has been needed, they have been shown more consideration; but the mischief is done, and let those who have caused it bear the responsibility. Every official position in the Council since that calamitous day when the old Council unfortunately resigned has been filled with a Kensingtonian Fellow. President, Vice-Presidents, Secretary, and Treasurer were all Kensingtonians till a month or two ago when trouble was at the door, and then, for decency sake probably, the Hon. and Rev. J. T. Boscawen was made a Vice-President, and that was the first compliment paid to a horticultural member of Council. It cannot be said, therefore, that the present difficulties were brought about by a horticultural Council, of which one would suppose a horticultural society ought to be composed.

But what is to be done? The men in power seem helpless, and have no remedy to propose. It is high time the Fellows took the matter in their own hands. Why should not a committee be appointed to confer with the Council, and act in unison with them in negotiating with the Royal Commissioners, or even to approach the Commissioners themselves? Let this be composed of earnest business men with a love of horticulture in their hearts, and imbued with the spirit and traditions of the Society. Let them not be of those fussy partisans who lately have shown themselves so prominently at the Society's meetings—such men, for instance, as complain of the Secretary's neglect of duty, and when appealed to have mistaken the wrong man for the Secretary—of such as puts himself forward so prominently that an inexperienced Council make him an Auditor of the Society, in which capacity he so egregiously fails as to pass accounts as paid which never have been paid, and of which he could never have seen the vouchers. It is not such men who are to form such a committee.

Another step might be taken which would help to mend matters. Let there be a committee nominated to make a house-to-house visitation over the whole of the South Kensington estate and solicit subscriptions and donations to enable the Society to meet its present difficulties. Some such course must be taken or the Society must lapse. But first of all let us see a strong Council of men in whom the Society can have confidence—men with statesman-like views, who can and will grapple with the present difficulties. Until we have such a Council there is no hope, let whatever may be done by Royal Commissioners or the public, that the Society will or can go on.

PREVENTING GREEN FLY.

Your correspondent ("Constant Reader") on orchard-house management in your last number, May 13th, suggests instant fumigation on the first appearance of aphis. I find that prevention is better than cure, and with the exception of this year (I was without tobacco rope at the proper time) when

I was troubled a little with green fly, I (my gardener) always have fumigated before the trees came into bloom, whether there was any appearance of fly or not—I may say when there was no appearance—and have never suffered from it for many years. I select a calm evening and fumigate a second time, or the second or third succeeding evening.—A THIRTEEN-YEARS SUBSCRIBER.

MANCHESTER HORTICULTURAL EXHIBITION.

WHILE in the metropolis horticulture seems to be in a moribund condition, and everything at what ought to be its head quarters seems to be in hopeless confusion, it is a happy thing that in the provinces all seems reversed. The great provincial shows of the north of England at any rate show no diminution of interest or lack of support; nay, rather increased vigour seems to be the rule with them. No greater contrast could possibly be afforded than that which I was witness to at South Kensington on Wednesday last and Manchester on Friday. As one looked into that miserable arcade and saw not an exhibition of pot Roses or Azaleas as announced, but a wretched lot of things occupying about one-half of one arcade, and heard exasperated visitors asking, "Where is the show of pot Roses?" the only redeeming point being the herbaceous plants; and then looked down that grand tent at Manchester filled with examples of skill which have never been surpassed, or saw the banks of Orchids and stove and greenhouse plants in the great conservatory, and then caught a glimpse of the long lines of carriages waiting outside the gates, one could not help (as more than one person observed afterwards) being reminded of the long-past glories of the Chiswick Shows. The weather was lovely beyond all precedent for a Manchester Whitsuntide. For the last eight years the opening day has been ushered in with rain, but on Friday last we were in July with a soft balmy air and a brilliant sun, the gardens fresh in the loveliness of early spring, and everything "couleur de rose."

The interest of the prize list is not so great, of course, to those who live at a distance as to those who are closer at hand, but when I say that amongst amateurs Dr. Ainsworth, Mr. Wrigley, Mr. Shuttleworth, Mr. Stevenson, &c.; and amongst nurserymen Messrs. Paul & Son of Cheshunt, Mr. Turner of Slough, Mr. Williams of Holloway, Mr. Standish of Bagshot, Messrs. Rollisson of Tooting, Mr. Jackman of Woking, came into competition with the Messrs. Coles, Mr. Rylance, Mr. Cypher, the Messrs. Yates, and others who may be looked upon as local exhibitors, those at a distance will readily believe that there was an abundance of good material to make up a grand show.

Fierce was the competition for the premier prize for pot Roses (£25), carried off after close grappling by Mr. Charles Turner of Slough, Messrs. Paul & Son taking second place. We may, perhaps, have seen as fine specimens in London, notably last year at South Kensington, but Manchester never saw such pot Roses, and these two great growers certainly never excelled the plants exhibited. Mr. Turner had grand examples of Céline Forestier, Souvenir d'un Ami, Victor Verdier, Paul Perras, Beauty of Waltham, and Charles Lawson; while in the Messrs. Paul's collection the following were especially grand:—Victor Verdier, Camille Bernardin, Horace Vernet, Souvenir d'un Ami, Princess Mary of Cambridge, and Madame Victor Verdier. In the collection for twenty Roses in 8-inch pots the order was reversed, Messrs. Paul & Son being placed first, and Mr. Turner second. And here let me say, that in the opinion of some of the best rosarians in the kingdom the most beautiful Rose in the two collections was (hear ye that, Messrs. Camm and others, who rated me for praising it last year!), Madame Lacharme. I shall watch with interest how she behaves later on, but as a pot Rose she is a long way ahead of all the white Roses we have.

But grand as these large Roses were as examples of cultural skill, I do not think that they bore in this respect any comparison with the exotic Ferns, more especially the Gleichenias exhibited by that enthusiastic grower Mr. Shuttleworth of Preston. One has been accustomed to see the Gleichenias as exhibited by Mr. Baines, Mr. Williams, and others, but such examples were never shown as those in Mr. Shuttleworth's collection to-day. The collection of eight comprised Gleichenia speluncæ, rupestris, and flabellata; Cyathea medullaris, Dregei, and princeps, Davallia elegans, and Leucostegia immersa. Nor were his collections of Adiantums less meritorious, consisting of Farleyense, cuneatum, assimile, tenerum, formosum, and a most striking form of Adiantum capillus-Veneris raised by his sister-in-law, and called after her, Dawsoni. The pinnæ were very large, and altogether the plant very remarkable. Mr. Wrigley had also a fine collection of exotic Ferns.

Two collections of Clematises were exhibited by Messrs. Standish and Jackman, the latter being one of great beauty. It comprised Countess of Loudoun, rubella, velutina purpurea, lanuginosa candida, Thomas Moore, Jackmanni, Mrs. J. Bateman, Alexandra, and several seedlings. Rhododendrons were finely exhibited by Mr. Standish and Messrs. Yates, some of very fine quality being staged by the former gentleman; and some very nice collections of herbaceous plants came from Messrs. Rollisson of Tooting, and Mr. Yates of Sale.

The Azaleas were, some of them at least, very fine, although the backwardness of the season had hindered many of them from being sufficiently in bloom, but the collection shown by Mr. Turner of Slough, of twenty varieties in small pots, was exceedingly beautiful. The plants were small but symmetrical, and completely covered with bloom, and amongst them were the following kinds:—Madame Alex. Hardy, Duchesse de Nassau, Prince Albert, Apollo, a truly grand flower; Flag of Truce, Reine des fleurs, Stella, Mademoiselle Marie Van Houtte, Duc de Nassau, and Eugène Mazel. The Belgian varieties evidently both for size and colour are beating our English-raised varieties out of the field.

The Pelargoniums, Calceolarias, Gloxinias, &c., call for no special remark; indeed they were the weak point of the Show, and, except the collections exhibited by Mr. Rylance, were not possessed of any merit. Having indicated the most remarkable productions in the large tent, I now pass on to notice the great wealth of beauty and rarity contained in the great conservatory.

Certainly those who want to see exhibitions of Orchids must now go to Manchester, for nowhere do we find collected together such exhibitions as at this Whitsuntide Show. Dr. Ainsworth, Mr. O. Wrigley, Mr. Broome, Mr. Leech, Mr. Taylor amongst amateurs; and Mr. Williams of Holloway, Mr. Yates, and Messrs. Rollisson, nurserymen, all contributing grand collections and specimens. Amongst those sent by Mr. Wrigley were grand masses of Masdevallias, such as I have nowhere else seen, comprising Lindeni, Harryana, ignea, ignea gigantea—these weird-looking Orchids were unknown to growers in those long-past days of Chiswick. He had also Odontoglossum Roezli and Roezli purpurea, rare and beautiful, the lovely O. vexillarium in fine health, Saccolabium ampullaceum, &c. In Dr. Ainsworth's collection I noticed grand plants of Vanda suavis, Phalænopsis grandiflora, and Phalænopsis grandiflora aurea with more intense golden lip, the rare and beautiful Dendrobium Wardianum, the yellow Anguloa Clowesii, Oncidium sphacelatum (a grand mass), Odontoglossum Alexandræ, Lælia purpurata, and Cattleya Mossiæ. Mr. Broome had fine plants of Dendrobium Bensoniæ, Cattleya Mendeli (very beautiful), Phalænopsis Lüddemaniana. Amongst Mr. Williams's plants were fine examples of Oncidium Inteo-purpureum, Cypripedium caudatum and villosum, Aërides Veitchii and Fieldingi, and Dendrobium densiflorum.

The collections of stove and greenhouse plants shown by Messrs. Cole & Son, Mr. Rollisson of Tooting, Mr. Cypher, Mr. Shuttleworth, Mr. Stevenson, and Mr. Samson, were all that could be wished for; Messrs. Cole & Son taking, as they ever do, the foremost place. Amongst their plants were grand specimens of Azaleas Conqueror, Iveryana, and Duc de Nassau; Pimelea mirabilis, Cycas revoluta, Cocos Weddelliana, Statice profusa, Anthurium Scherzerianum, Clerodendron Balfouri, Genetyllis tulipifera, Erica Cavendishii, Epacris grandiflora, and Bougainvillea glabra.

One never sees anywhere such collections of boxes of cut blooms as at Manchester, nor such tastefully arranged bouquets. Messrs. Cole exhibited in the former class a very beautiful box containing Phaius Wallichii, Musa coccinea (most brilliant), Ixora coccinea, Cypripedium caudatum, Ixora princeps, Cattleya Mossiæ, Erica ampullacea obbata, Aphelexis macrantha purpurea, and other choice blooms. The bouquets exhibited by Mr. Cypher of Cheltenham, Messrs. Turner of Liverpool, and Mr. Rylauce were very good—indeed I question very much whether we ever see in London flowers so tastefully arranged.

Besides the exhibits in the tent and conservatory, of which we have recorded the most remarkable features, the ground outside was filled with greenhouses, boilers, and various contrivances connected with horticulture, including samples even of peat, &c., exhibited by Mr. Epps of Lewisham, worthy, indeed, of the attention of Manchester, where so much is used for Orchid-growing. There was also one tent devoted to what we call art in connection with horticulture, containing some of the very choicest productions of English and foreign manufacture in glass and china for all matters pertaining to fruit and flowers. Here were vases and cachepots from Leucojes, the royal factories at Berlin and Dresden; majolica dishes from Minton; vases, jardinières, &c., from Worcester, and some of the choicest and as yet unsurpassed glass from Webb of Stourbridge. Many of these were filled with some of the most beautiful imitations of flowers from some of the most eminent French artificial flower manufacturers, which might deceive even experienced growers.

Manchester is never behindhand on these occasions in the hospitality she shows to those who are resolved to assist as judges and exhibitors, and as usual there was a dinner at the "Old Trafford Hotel."

Mr. Leo. H. Grindon, in proposing the health of the exhibitors, said that the present was one of the grandest shows that had ever been held in Manchester. There were more good plants exhibited that day, taking the total, than they ever had before.

Mr. T. M. Shuttleworth of Preston, whose name was associated

with the toast, said that he had no hesitation in saying that the Show they had seen that day was the finest that had ever been seen in England. London could not approach to it.

Mr. Williams and Mr. Wills returned thanks on behalf of the nurserymen.

Mr. G. Paul proposed the health of the Judges, which was responded to by the Rev. H. Dombrain.

"Success to the Manchester Botanical and Horticultural Society" was proposed by Mr. W. Paul, and warmly responded to.

AMERICAN ALOE'S RAPID GROWTH.

It is not unusual in the small island of Guernsey to see fine specimens of the Agave americana, commonly called American Aloe, from thirty to forty years old, throw up a flower spike of nearly as many feet in the space of a few weeks' time. There is one still standing on the property where I am gardener, which flowered in the autumn of 1873, growing at the rate of 6 inches per day during three weeks.

It commenced flowering the first week of September. About the 10th I took the actual measurement and found it stood 12 feet 6 inches high, and in exactly twenty-one days more it measured 23 feet. The scape now measures 25 feet in height, and 25 inches in circumference at 5 feet from the ground, where it starts up from amongst the numerous large fleshy leaves, about fifty in number, each measuring 8 to 10 inches across and 6 to 7 feet long. The leaves are now almost withered and dilapidated, but before flowering the plant was 12½ feet in diameter and 8 feet high.

From strict inquiries I understand it to be now about thirty-eight years old, But four years ago a similar one flowered in this locality, which stood, I am told, 35 feet high. The flowers of the present plant opened freely and showed their yellow anthers to great advantage, trembling with the slightest wind, but no seeds have ripened.

What I found remarkable was, a number of small offsets flowering last year round the base of the old plant. This Aloe, and two others equally large, which I daresay will soon flower also, have been planted in their present positions in 1872, under the able instructions of Mons. André, during the formation of one of the beautiful *parcs* of which he is the originator in Guernsey, and which will long remain as a souvenir of his genius.—J. J. G.

"WATER-CREASES!"

Farringdon Market at four o'clock in the morning was a curious sight. As many as twenty enormous railway vans, laden with baskets of Water-cresses piled tier above tier, blocked up the street leading from the main thoroughfare. The hampers were being rapidly distributed along two rows of stalls, close to the market-gates, which were thronged by such a collection of men, women, and children as I had never seen except in Seven Dials on Saturday night, or in Kentish Hop fields at the time of the picking. Nine-tenths were Irish, and the chaffering all along the line was proportionately lively. The sales varied in amount from the modest four-penn'orth doled out by the handful to the five pounds' worth which was carried to the go-cart of the flourishing greengrocer. For the most part, however, a sum of four to five shillings was invested by the hawker or hawkeress, but few parted with their money without a considerable amount of bargaining. The "creases" were packed in little hampers in four separate layers, and there was often a keen competition for particular "middles" or "sides" (*i.e.*, for the layers occupying those places in the hampers), which to a practised eye appeared to be especially tightly compressed. As to the coarseness or fineness of the plants, too, much connoisseurship was called into play. "Just look at them middles," said a dealer: "why, they're so tender as your grandmother, without any teeth, 'nd be glad to eat 'em." "Keep? They'll keep till Sunday morning, and parties comin' out o' chapel 'll be glad to take 'em home to dinner." One magnificent specimen of an old Irishwoman enlivened the proceedings with much jocular comment, interspersed with queer scraps of old verse, before she walked off with a huge basket of "creases" that even a Swiss porter would have found rather heavy. With long white hair, with eyes of the lightest blue that Tipperary ever produced, with a complexion that needed no adventitious colouring, with a bright-red shawl, and a coarse stuff dress looped up over tremendous boots, she was as picturesque an object as one often sees. Presently there came tripping through the big iron gates a couple of little children, evidently brother and sister, who proceeded to trade with the most business-like air. "One middle and a side" were what they wanted, and it was curious to see how cleverly they beat down the price from 2*s.* 6*d.* to 1*s.* 10*d.* The little girl did not seem to be more than ten or eleven, and her brother was at least a couple of years younger; but even at that age they were alone in the world, earning their own livelihood. They had, as I learnt, no father, no mother, no relations at all; they rented, for 1*s.* 6*d.* a-week, a room in a court near Drury-lane; and here they were, looking tolerably tidy and clean, laying in their stock-in-trade for the day. The dealer, an old woman, who was too fat not to be good-natured, confided to me that she had let them have the "creases" for 2*d.* less than she had just been offered. "Them kids is wonders," she observed, "and most of us is pretty easy with them."

Water-cresses, I learnt, are about the best paying of all vegetables to hawk about the streets, for the profit is rather more than 100 per cent.; so the "kids" would make about 2*s.* for their day's work, provided they could sell off their whole stock; and this they generally succeeded in doing. "Why, there's people as 'ud give them children tuppence for a bunch as they'd grudge a penny for to you or me," said the old lady; and I must admit that if I ever go into partnership with the speaker in the Watercress line, then we shall have no chance against the two brats if the interesting appearance of the sellers is to be an element in the business.

Most of the Watercresses, it seems, are sold in poor neighbourhoods. Cabmen, railway porters, and 'busmen are all good customers, and a regular trade is also driven among the lodging-houses at Highbury and Hoxton, where the German clerks live, and in some of the foreign quarters about Soho. At the West-end the householders are above buying from costermongers, and order their "creases" from their greengrocer. One club in Pall Mall buys from an old Irishwoman who has supplied it for the last twenty years, but this is a solitary exception. In parts of the slums of Westminster there is a large demand, for there is a wide-spread belief among the poorest classes that there is nothing so good as "creases" to purify the blood. My informant had known them cure a man whom she described as "spotty all over," when even Holloway's pills had failed, and the force of panegyric could go no further. "Farndon," it appears, is not open on Sunday morning, being under the control of the Corporation of London; and on that day the market is held in the Seven Dials, but the "creases" sold there are mostly those brought to London on Saturday morning, and not disposed of on that day.

They are grown in all parts of the country. Liphook in Hampshire, Springhead in Kent, the Valley of the Thames above Reading, and that of the Kennet beyond Newbury, furnish a large proportion of the daily supply; and a clever cultivator who knows how to humour his crop with the water and the mud that they like finds the business very profitable. —(*Morning Post.*)

PRIMULA CORTUSOIDES AMŒNA HARDY.

Seeing in one of your late numbers a doubt as to the hardiness of Primula cortusoides amœna, I think you may like to know that I removed a bed of them, and also one of P. cortusoides, from a south border to one facing north after the bloom was over last summer. Here they were forgotten, and when I wished to put them into shelter for the winter I could not find them, the plants having all died down. I made up my mind I should never see them again, but this spring they came up vigorously.

The P. cortusoides is now in full flower, but the P. c. amœna, though in vigorous leaf, shows no sign of flowering. Having survived the late severe winter in the neighbourhood of York, proves it to be tolerably hardy.—P. M.

Royal Horticultural Society.—The meeting of the Scientific, Fruit, and Floral Committees fixed for 26th inst. has been postponed on account of that day being Derby day. The next meeting of these Committees will take place on Wednesday, June 2nd.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

Dichorisandra Saundersii. *Nat. ord.*, Commelinaceæ. *Linn.*, Hexandria Monogynia. Flowers white, broadly edged with blue.—"Introduced from Brazil by W. Wilson Saunders, Esq., F.R.S., and given by him to Kew, where it flowered in

July, 1873; it forms a pretty stove plant about 3 feet high."—(*Bot. Mag.*, *t.* 6165.)

The French Paradise Apple (*Pommier de Paradis*).—"The French Paradise stock is of spreading habit, with purplish shoots. The inflorescence is abundant, and precocious as to season, and also in relation to the age of the plant. The young leaves are glabrescent, oblong-lanceolate, the apex acute, the base rounded, the margin crenulated, the crenulations mucronulate; the petiole is less than half the length of the leaf, setose, and the stipules are linear-subulate, as long as the petiole. The peduncles are about three-quarters of an inch long, setose; the flower-tube glabrous, urceolate, reddish, one-eighth of an inch long; the calyx-lobes triangular, gradually acuminate, setose within; the petals concave, oblong, obtuse, tapering at the base into a short stalk, and provided with a few cottony hairs on the inner surface; the styles are crested at the base for a short distance, and there slightly covered with cottony hairs, dividing above into five stigmatic branches.

"The fruit, which is a really good early eating Apple, is, according to our notes, of medium size, oblate, somewhat angular, yellow, changing on the exposed side to deep golden-yellow, and sometimes having a thin flush of rosy red. The eye is broad, but closed, sunk in a rather deep cavity. The stalk is short, scarcely projecting from the hollow, which is not so deep as that of the eye. The flesh is pale straw colour, fine-grained, solid, juicy, and with a brisk agreeable flavour. It ripens in the middle and end of August, and would form a good useful early dessert Apple, independent of its value as a dwarfing stock for Apple trees grown in the bush or pyramidal form."—(*Florist and Pomologist*, 3 s., viii., 97.)

CELOSIA PYRAMIDALIS.

For the decoration of greenhouses or conservatories during the late summer and autumn months the Celosia pyramidalis aurea and coccinea are enduring and beautiful, and are well deserving extensive culture. The habit is pyramidal, branched or feathered, and the height depends upon the culture. High culture produces plants 2½ to 3 or 4 feet in height; small pots and high feeding produces very much dwarfer plants; and starving treatment results in smaller plants which not unfrequently, from their fine feathery habit, are fully as useful as those which have been more liberally treated. The varieties vary considerably in the mode of growth, though the pyramidal form is maintained in most plants, but some branch very near the base and are grandly feathered to the summit, the branchlets arching over with much grace and elegance. These are the most beautiful. The tasselled forms are heavier in appearance, being a combination of coarse feathers and small cockscombs. In colour too they also vary considerably, pink, rose, crimson, scarlet, orange, yellow, and all the various shades of those colours. Some plants in a young state are apt to show a small comb, and the impression is given that the strain is a bad one, and under the impulse of the moment the plants are thrown away. That is too hasty judgment. Celosia pyramidalis is a broken Cockscomb, and a premature comb is not an evidence of bad strain, but we can hardly say it shows a good one; yet if the small precocious combs are pinched out, and the plants are grown on, the plants and quality of the strain will be surprising. The plants have a tendency to revert after the removal of the heart comb to the comb form. These combs whenever exhibited should be removed, and this will throw more vigour into the feathery parts, causing fine-habited plants and a more dense and compact growth; in fact, judicious and early stopping (confining it, however, to the strong side shoots, and to the upper part so as to preserve the pyramidal form) is essential to freedom from comb, and to produce elegant feathery plants.

The culture required is exceedingly simple. From the middle of April to the middle of May is a suitable time to sow the seed, and from seed sown early in June I have seen plants surpassing in beauty and freshness for autumn decoration those sown at an earlier period of the year. The seeds require to be sown rather thinly in light moderately rich soil, and the seeds covered about an eighth of an inch deep. The pots should be placed in a hotbed having bottom heat of about 75°, and top heat of 65° to 75°, with a rise from sun heat and air. The seedlings require to have the soil moist, and yet if kept very wet they are liable to damp. It is important they be kept near the glass and be well ventilated, so as to induce sturdy growth. When the plants have two or three leaves in addition to the seed leaves they should be potted off singly in small pots, and not deeper than the first leaves, returning them to the hotbed and shading for a few days. The plants must be kept regularly moist, but still must not be overwatered. Shift the plants into larger pots as they fill with roots, potting rather firmly. The last shift may be into 9-inch pots, which are sufficiently large for the largest specimens, and at this move the drainage should be liberal, whilst for the others moderate drainage will suffice. The plants when grown too tall for a frame should be removed to a light house or pit, where they can be kept near the glass and have light on all sides. No artificial heat will be needed, providing the temperature, by moderate air-giving, be kept up so as to be that of a cool stove. The plants are the better of light sprinklings overhead morning and evening, and the floors and other surfaces kept moist. Liquid manure may be given at every alternate watering after the pots are filled with roots. Plants so grown will be tall and very effective for conservatory decoration. After they are fully developed they require to be carefully watered, or they will rot at the stem. If kept very dry the foliage becomes yellow, therefore water only to keep from flagging. The plants will remain in good condition for many weeks.

If dwarf plants are required we have only to keep them in small pots, standing upon boards or slates so that they do not root through into the hotbed, liquid manure to be given at every alternate watering and the plants kept near the glass. The soil in potting should be made very firm, and the shifts but two—*i.e.*, from 3-inch to 4½-inch, and from the latter to 6-inch pots, the sides of the balls at each potting being loosened so as to remove part of the close matting of the fibres. Shade for a few days after potting, as the plants from the loss of fibres would otherwise flag and the foliage suffer. The drainage at the last potting should be liberal, and in all cases it is better to use half-inch bones than crocks. Light turfy-loam three parts, and one part old cow dung or well-rotted manure, well mixed and broken up fine, will grow them perfectly.—G. Abbey.

WELLINGTONIA GIGANTEA.

We are enabled to publish two woodcuts, one of which gives a good idea of the size of this Brobdignagian tree, and the other of its cone which is but rarely seen.

The Wellingtonia was discovered by that young martyr of science, David Douglas, in 1826, and his journal of an excursion to obtain its cones is one of the most exciting of narratives. We have space only for one extract:—

"Thursday, October the 25th. Weather dull, cold, and cloudy. When my friends in England are made acquainted with my travels I fear they will think that I have told them nothing but my miseries. This may be very true; but I now know, as they may do also if they choose to come here on such an expedition, that the objects of which I am in quest cannot be obtained without labour, anxiety of mind, and no small risk of personal safety, of which latter statement my this day's adventures are an instance. I quitted my camp early in the morning to survey the neighbouring country, leaving my guide to take charge of the horses until my return in the evening, when I found that he had done as I wished, and in the interval dried some wet paper which I had desired him to put in order. About an hour's walk from my camp I met an Indian, who on perceiving me instantly strung his bow, placed on his left arm a sleeve of raccoon skin, and stood on the defensive. Being quite satisfied that his conduct was prompted by fear and not by hostile intentions, the poor fellow having probably never seen such a being as myself before, I laid my gun at my feet, on the ground, and waved my hand for him to come to me, which he did slowly and with great caution. I then made him place his bow and quiver of arrows beside my gun, and, striking a light, gave him a smoke out of my own pipe and a present of a few beads. With my pencil I made a rough sketch of the cone and Pine tree which I wanted to obtain, and drew his attention to it, when he instantly pointed with his hand to the hills fifteen or twenty miles distant towards the south, and when I expressed my intention of going thither cheerfully set about accompanying me. At mid-day I reached my long-wished-for Pines, and lost no time in examining them and endeavouring to collect specimens and seeds. New and strange things seldom fail to make strong impressions, and are, therefore, frequently overrated; so that lest I should never again see my friends in England to inform them verbally of this most beautiful and

immensely grand tree, I shall here state the dimensions of the largest I could find among several that had been blown down by the wind. At 3 feet from the ground its circumference is 57 feet 9 inches; at 134 feet, 17 feet 5 inches; the extreme length 245 feet. The trunks are uncommonly straight, and the bark remarkably smooth for such large timber, of a whitish or light-brown colour, and yielding a great quantity of bright amber gum. The tallest stems are generally unbranched for two-thirds of the height of the tree; the branches rather pendulous, with cones hanging from their points like sugar-loaves in a grocer's shop. These cones, are, however, only seen on the loftiest trees, and the putting myself in possession of three of these (all I could obtain), nearly brought my life to a close. As it was impossible either to climb the tree or hew it down, I endeavoured to knock off the cones by firing at them with ball, when the report of my gun brought eight Indians, all of them painted with red earth, armed with bows, arrows, bone-tipped spears, and flint-knives. They appeared anything but friendly. I endeavoured to explain to them what I wanted, and they seemed satisfied, and sat down to smoke, but presently I perceived one of them string his bow, and another sharpen his flint-knife with a pair of wooden pincers, and suspend it on the wrist of the right hand. Further testimony of their intentions was unnecessary. To save myself

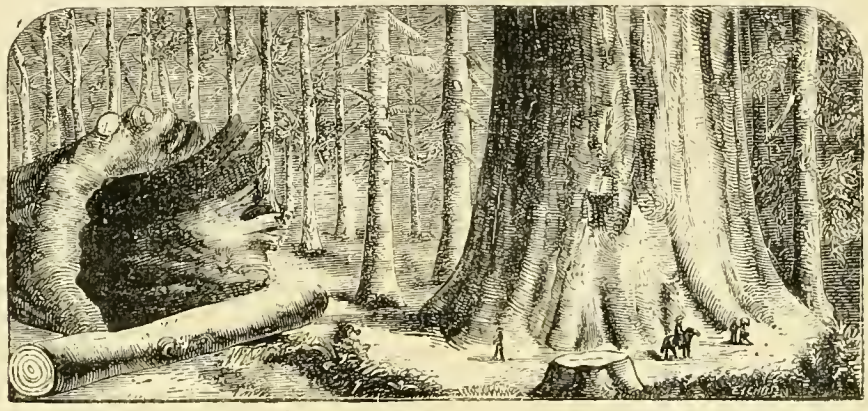


Fig. 94.—Bases of two of the trees.

by flight was impossible, so, without hesitation, I stepped back about five paces, cocked my gun, drew one of the pistols out of my belt, and holding it in my left hand and the gun in

Fig. 95.—Cone of Wellingtonia gigantea.

my right, showed myself determined to fight for my life. As much as possible I endeavoured to preserve my coolness, and thus we stood looking at one another without making any movement or uttering a word for perhaps ten minutes, when one at last, who seemed the leader, gave a sign that they wished for some tobacco: this I signified that they should have if they fetched me a quantity of cones. They went off immediately in search of them, and no sooner were they all out of sight than I picked up my three cones and some twigs of the trees, and made the quickest possible retreat, hurrying back to my camp, which I reached before dusk. The Indian who last undertook to be my guide to the trees I sent off before gaining my encampment lest he should betray me. How irksome is the darkness of night to one under my present circumstances! I cannot speak a word to my guide, nor have I a book to divert my thoughts, which are continually occupied with the dread lest the hostile Indians should trace me hither and make an attack; I now write lying on the grass with my gun cocked beside me, and penning these lines by the light of my Columbian candle—namely, an ignited piece of rosiny wood."

As a standard of comparison we remind our readers that the London Monument is 202 feet high, so that the Wellingtonias are higher than that by more than from 80 to 90 feet.

The following list of the synonymes and botanical description of the tree we copy from "Gordon's Pinetum"—"Wellingtonia gigantea, *Lindley*; Sequoia gigantea, *Endlicher*; S. Wellingtonia, *Seemann*; Washingtonia gigantea, *of the Americans*; W. Californica, *Winslow*; Americanus gigantens, *Hort. Amer.*; Taxodii, ap., *Douglas*; Taxodium Washingtonianum, *Winslow*. Leaves needle-shaped, spirally alternate, spreading, persistent, and of a light green colour on the young plants; those on the adult trees scale-formed, closely inlaid, rounded on the back and concave on the inner face; those on the branchlets much shorter, very close, and regularly imbricated; those on the larger branches longer, looser, decurrent at the base, and tapering to an acute point, but sometimes rather obtuse. Branches spread out horizontal, much divided, and furnished with numerous laterals. Branchlets cylindrical, frequently pendulous, and thickly covered with light-green glaucous foliage, cone-bearing ones slightly thickened and entirely covered with scale-formed leaves closely imbricated, the upper ones oval, and broadest at the base. Cones solitary on the ends of the branchlets, 2 inches long, and more than 1 inch in diameter, ovate, blunt-ended, and slightly tapering towards both extremities. Scales in series, placed nearly at right angles upon the axis of the cone, stipitate, thickened, and enlarged from the point of insertion as far as the summit, which is depressed and wrinkled on the external face, and furnished with a small prickle in the centre of the little hollow. Seeds from three to five under each scale, but mostly five. Seed leaves from three to six in number, but mostly in fours.

"According to Mr. G. L. Trask, who formerly exhibited a portion of the bark set up in the Crystal Palace to show the great size this tree attains in its native state, gives the following as the dimensions of one of the largest of eighty trees, growing in a grove at San Antonio—viz., height, 363 feet; circumference near the ground, 93 feet; circumference 100 feet from the ground, 45 feet; bark, 18 inches thick; age according to annual rings, from 3000 to 4000 years.

"It is found growing on the slopes of the Sierra Nevada, near the sources of the Stanislaus and San Antonio, in Upper California, in sheltered valleys, at an elevation of about 5000 feet. It is quite hardy and grows rapidly."

SETTING-UP GRAPES FOR EXHIBITION.

Grapes are very often seen inefficiently set up for exhibition, and are consequently not seen to the best advantage. This is especially the case at some of what may be termed country shows. I have therefore thought that fig. 96, taken from a photograph, would serve to show exactly what is generally considered by exhibitors of Grapes the best way of carrying and setting-up Grapes for competition. The bunch, it will be observed from the figure, is resting on a slanting board. The board is first covered with a thin sheet of cotton wadding, and then covered with a sheet of soft white paper. The bunch is cut with rather more than an inch of the Vine adhering to each side of its stem. A piece of narrow tape is fastened to the piece of Vine, and passed through a hole near the top of the back perpendicular board, and securely fastened there. To keep the bunch firmly in its place, a piece of narrow soft tape is worked with great care between the berries near the middle of the bunch with a long needle, and each end of the tape is passed through holes previously prepared on each side of the main stem of the bunch and tied underneath. The bunch is thus fixed so that it can neither slip down the slanting board nor roll about.

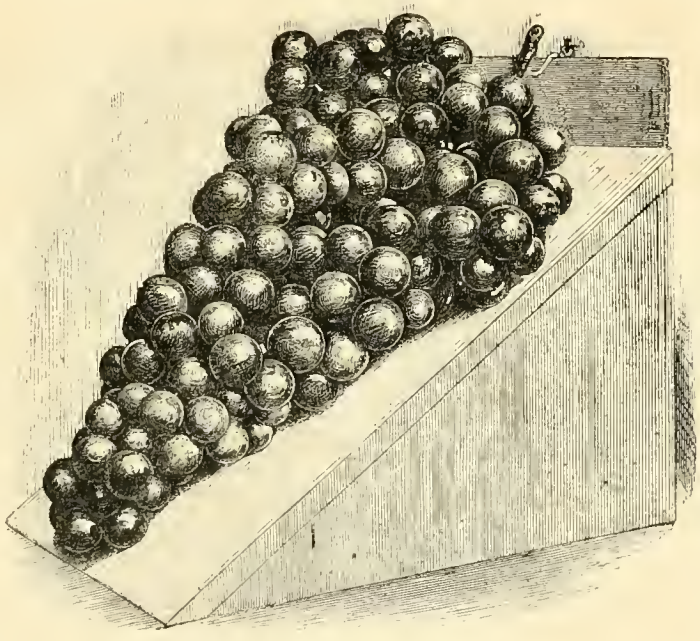


Fig. 96.

When more than one bunch is set up, the Grape-board must be of proportionate length. But it is not desirable to have them longer at any time than will hold three to four bunches, with sufficient space between each to let them be properly inspected.

It is always best to fix the bunches just as they are cut from the Vines, always laying them on their flattest side. In doing this it is never desirable to lift a bunch after it is laid on the board, for it cannot be easily done without more or less disturbing the bloom of the Grape. When all are fixed in their places, fit what I shall call the exhibition platform into a square box just wide enough to take it in, and deep enough to clear the fruit when the lid is screwed on; then put a couple of screws through the box from the outside into the back board of the platform, and they cannot move. In conveying them care must be taken to keep the box level, and not to jolt it severely.

PACKING GRAPES.

The packing of Grapes to be sent long distances by rail and other conveyances requires to be carefully managed. There are many ways of packing them. I have seen each bunch laid on a thick stiff sheet of paper, and folded up sufficiently tight to prevent the bunch from moving about in the paper. They are then packed closely in boxes sufficiently deep to admit a layer of paper shavings under and over them, so that when the lid of the box is fastened down each parcel was held securely in its place. The stiffness of the paper is supposed to come in contact with the bunch at fewer points than when wrapped up in more flexible paper, and on that account to better preserve the bloom. There is, however, at the same time room left for the oscillation of those berries not in immediate contact with the paper, and this is objectionable. In sending Grapes to a distance I have never adopted this mode of packing, but have either wrapped each bunch in a sheet of fine tissue paper, and packed them on a firm bed of paper shavings as close as they would lie, with just sufficient wadding between each to fill up the irregularities of the outline of the bunches. When the box is thus filled a sheet of wadding is spread regularly over the bunches, and over all a layer of paper shavings, so that when the lid is shut down they are subject to as much pressure as prevents their moving. At other times, when only sending a few bunches in one compartment of a box, I have spread a sheet of paper over the shavings in the bottom of the box, and laid all the bunches as nicely fitted into each other as possible on it, then put another sheet of tissue paper over them, then some cotton wadding, finishing off with a layer of paper shavings. In this way I have always found them go quite safely. When a quantity has to be sent in one box it should be divided into compartments, so that when the box happens to be set down standing on end or side, the Grapes at the lower part of it cannot possibly be subject to much pressure from the top end of the box. I do not know of any way of sending them to preserve their bloom, for unless some person is sent with the box there must be packing material on the upper side of the Grapes.

Those who grow Grapes extensively for the fruit market, and have to send them in large quantities by rail, pack differently from any of the methods described above. Indeed, they use next to no packing material whatever. They place a few flexible paper-shavings in the bottom of a nearly oval-shaped wicker basket with sloping sides. The Grapes are cut and laid in layers round the sloping side of the basket, and layer after layer of Grapes are laid on without any packing material, until the basket is finished with a bunch in the centre. In this way they are packed firmly to prevent oscillation, and it is astonishing how little the bloom is tarnished. The baskets are then put into wooden boxes, generally two storey deep, and sent by passenger train. The fruiterer or salesman meets them at the terminus. Tons of Grapes are thus sent hundreds of miles to market with the greatest safety. The only danger of damage is from the upsetting of the boxes or any severe concussion.—D. Thomson (in *The Gardener*).

NOTES AND GLEANINGS.

It has been arranged to hold an International Fruit and Flower Show at the Alexandra Palace on the 2nd, 3rd, and 4th of September next. A liberal schedule of prizes will be issued in a few days.

—— We are sorry to learn that the Keighley Agricultural Association's Show has to be abandoned this year in consequence of the prevalence of small pox in the town and neighbourhood.

—— The Croydon Meeting of the Bath and West of England Society, commencing on Monday, May 31st, and extending over the four following days, promises in all respects to surpass any of its predecessors. The showyard, thirty-six acres in extent, is situated at Waddon, about half a mile distant from the Croydon railway station; and the entries in all departments are large and important beyond all precedent. The Poultry Show will be the largest ever held by the Society, and remarkable for the numerous entries of birds best adapted

for farm purposes. Altogether there are not less than 550 pens, 100 of which are Pigeons. The horticultural tent, under the direction of the Hon. and Rev. J. T. Boscawen, will contain a rich display of plants and flowers, contributed by eminent growers in the neighbouring counties. For the convenience of visitors special railway arrangements have been made by the several railway companies.

—— Our readers will regret, as we do, that our columns will contain no more of the notes from New Zealand contributed by Mr. William Swale. He died at Avonside, Christchurch, in that island, on the 18th of February.

—— Messrs. Barr have sent us a very pleasing posey of varieties of the Wild Hyacinth. There are three or four shades of blue and pink, and two forms of white. Some are single and others double. They are, of course, all hardy border flowers.

—— The splendid collection of Vandas of Mr. Robert Warner, at Broomfield near Chelmsford, is now in full bloom. Those who have had the pleasure to see Mr. Warner's collection know how rich it is; and as Mr. Warner is courteous enough to allow visitors to view his Orchid houses, now is a favourable opportunity for doing so.

—— Vine-culture in New South Wales is progressing very rapidly, the number of acres occupied for this purpose being 3183 in 1873, against 2568 acres in 1872, and the produce 575,985 gallons against 451,450 gallons. These figures relate only to the growth of Grapes for wine-producing purposes, but a considerable area is devoted to the cultivation of the Vine for other objects. In Western Australia also, where the soil and climate are eminently favourable to the growth of the Grape, this pursuit is becoming more general.—(*Nature.*)

NOTES on VILLA and SUBURBAN GARDENING.

Disbudding and Thinning Fruit.—There is a remarkable growth on most fruit trees this spring, and they advance so rapidly that no time must be lost in attending to them. Where the wood of Peaches, Nectarines, and Apricots has been laid-in rather thickly, and every bud almost has produced a shoot, thinning must be attended to forthwith. The work should be commenced at the thickest part of the tree first, otherwise the under leaves and fruit become yellow from the want of air and soon drop off. This is one reason why the buds at the base of a shoot are so often undeveloped, resulting in a naked part some 6 inches up the shoot when the tree breaks into growth another season.

As a rule disbudding should be begun early, as it is a work requiring the greatest care and judgment, and if it is done properly there will be less necessity for winter pruning. The object should be to secure an equal balance of strength in all parts of the tree, and every shoot left should have a place assigned it. The body of the tree should be especially considered, because the trees after attaining a good size are frequently naked at the base and centre, which always shows signs of bad management. I know of no particular rule as to the distance shoots should be left, for it may be that two of them must be left pretty close together in order to take the places of two to be taken out at the winter pruning, or, taking the reverse of that, it may be necessary to go a considerable distance, say 8 or 10 inches, on account of good young bearing wood of promise being close at hand. It must be understood that I am alluding to side shoots, as it is not frequently the case to interfere with the leading shoot, though sometimes that not being healthy it would be well to take it out and trust to a more promising one a few inches back; but there is generally a little sacrifice of fruit by this plan, because no fruit comes to perfection in advance of the leading shoot, unless it is allowed to grow a little foliage with it. This suggests that in disbudding, those shoots that are not wanted, and yet have fruit at their base, ought not to be taken clear out, but pinched off two or three joints beyond the fruit, which ensures the flow of sap and proper development and flavour of the fruit.

With regard to Apples, Pears, Plums, &c., that produce their fruit from spurs, not much disbudding is necessary, but rather a system of pinching-back to three or four joints, and this ought not to be done till the shoots are advanced so far as to make sure they are not fruit buds. These only grow a certain distance, and then begin to form a knot or bud, and show no sign of further elongating. After disbudding it is astonishing what rapid progress in growth the shoots make, therefore, as soon as possible, fasten them to the wall. Possibly, if not delayed too long, one nail to a shoot would be sufficient. By no means should shoots when growing fast be nailed too close to the point, for this in many cases cripples them. The chief object is to secure them against injury from wind.

Thinning the Fruit.—This operation is especially necessary this year. Like disbudding, it should be done at several different times, first taking out those that are most crowded and those which are ill-formed or misplaced. A sharp-pointed pair of scissors is a handy instrument for the work, as pulling the fruit off, especially if they are healthy and firm on the tree, runs the risk of pulling a strip of bark off as well, and then comes a risk of gumming or canker, because at such places the wound does not repair itself before winter sets in, and at such tender places the frost suddenly takes effect, because after all the Peach and Nectarine are not really hardy fruit trees.

As to the distance at which the fruit should be left I know of no strict rule; this must be left to the operator, who ought to be the best judge of the state of the tree, whether in good health, or bad, or medium. On a vigorous tree the fruit may be left thicker than on one less robust, and in some parts of the tree it may be allowed to carry more fruit than another. The soil must also be taken into account. In good soil a tree may be allowed a heavier crop than if the reverse, or even an approach to it, is the case. The plan which I practise myself is to take a general survey of the tree, and take all the above points into consideration, and judge accordingly.

I believe there are no fruits grown but what would be much improved in size and flavour by a judicious system of thinning, even down to the humble yet useful Gooseberry and Currant.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

HARDY FRUIT GARDEN.

It is many years since we had such a good show for fruit on walls, standard, pyramid, and dwarf trees. Plums have set well, notwithstanding that the blossoms were exposed to frost winds from the east; the trees are also free from insect pests. Last year the trees suffered much from swarms of aphides, and though we failed to rid the trees from the insects until the young wood had suffered severely, the injury is not apparent this year. The best way to destroy the aphis is to syringe with water in which soft soap has been dissolved, and if a little tobacco liquor is mixed with it so much more effectual will be the application. We have done nothing to the trees as yet except to keep the hoe at work amongst them. It is too early to stop the young growths. Strawberry plants are growing very strongly, but if the present hot and dry weather continue it will be desirable to give them a good watering.

Wall fruit requires attention now. Apricots should have a final thinning, as the fruit is approaching the stoning period. Growths not required should be pinched back to two or three leaves. Peaches and Nectarines on walls must now be attended to. As all the fruit is produced from the young wood and seldom from spurs all the foreright growths should be rubbed off, and only a sufficient number of shoots left on to produce the bearing wood for next year. Watch for aphis, and on the first appearance of it syringe the trees.

Passing through one of the largest gardens in the country some time ago a remark was made about the very unhealthy and weakly condition of the wall trees, and the gardener stated that they were very nearly lost from an attack of aphis. When the young wood and even old branches persist in dying-off during the winter months, and the trees are otherwise in an unsatisfactory condition, the chances are that the reason is to be found in imperfectly-ripened wood from the attacks of red spider or other insects. If the trees are encouraged to make healthy growth in summer, and the wood has ample space allowed to develope itself and to ripen, we should hear of fewer complaints of shoots dying-off "without any apparent cause." If a tree produces gross watery growths in summer then the roots are wrong, but if solid fruitful wood is produced this will not suffer in winter. If time cannot be spared to properly attend to the Peach wall, it will be better to root-out the trees and plant Apricots and the finer Pears. Young trees that have not yet covered the wall must be seen to, or leading growths may be broken off by gales of wind. Nail-in all the wood that will be required, and stop back growths that are not wanted. A hint may also be required about trees that were grafted in March or April or budded last autumn. The clay may be removed and the bandages loosened, removing all shoots that start from the stock; the young growths should be supported with sticks, and be tied to them as they advance.

FRUIT HOUSES.

Vineries.—In the earliest houses the Grapes are very nearly ripe, and after this time the only care requisite is to keep the berries plump and free from dust. No plants should be allowed in the house, and it will seldom be necessary to sweep the paths, but if they require to be done a little water sprinkled first will prevent the dust from rising. Sometimes lateral growths will ramble out of the bounds allotted to them at this time, and if they are cut back now they will not start again. The Grapes should be well shaded by the leaves if it is intended that they should hang long. There is plenty of work in the late houses,

setting the fruit, stopping lateral growths, and training them down to the wires.

ORCHARD HOUSE.

The trees have all been re-arranged and more space allowed by removing some of the Pear and Plum trees outside. The growths have also been stopped and thinned out; the house is also syringed night and morning, applying the water with considerable force from a garden engine. Strawberries on the shelves are either in flower or the blossoms have set; in the latter case the fruit has been thinned out to from six to a dozen on each plant. The fruit must also be supported above the leaves with sprays of Elm or Beech. When the fruit is set apply the syringe vigorously to the under sides of the leaves, it is the only certain way to keep the plants free from spider. Our plants are now freely watered, and every alternate watering is with liquid manure.

CUCUMBERS AND MELONS.

The work in this department is comparatively easy, as but little artificial heat is required. Thinning-out the old growths and tying-in others in their place must be attended to. There is no excuse for spider being on the leaves, as the syringe may be used two or three times a-day. Cucumber houses may be used for other purposes if required during the summer months, as a plentiful supply of fruit may be obtained from frames. With good management Melons that were sown in January will now be producing ripe fruit; this should be supported to the trellis on small boards fixed under the plant and attached to the trellis by wires until it is quite ripe. It can easily be known when the fruit is ripe by the perfume which it gives off, and by cracking round the stem where it is attached to the fruit. If the fruit is not required at the time it is cut from the plant it may be removed to a cool room, where it will keep a week or ten days.

GREENHOUSE AND CONSERVATORY.

Air should now be freely admitted, the ventilators front and back should be thrown open to their fullest extent unless the wind is high. They may also be left open all night unless tender plants have been brought in from the stove or forcing houses. Water must also be applied freely to the plants: of course it may be overdone, but a little care would prevent this. All plants making their growth must be watered before the mould in the pots becomes so dry as it is allowed to do when plants are at rest or in winter. The hair-like fibres of Indian Azaleas, Cape Heaths, and many New Holland plants are seriously injured if the soil becomes so dry that the ball shrinks away from the sides of the pot. Another evil of equal magnitude is imperfect drainage. When the plants are repotted the crocks should be laid in carefully, and an inch of fibry peat free from dust should be placed over them. If worms are excluded the compost will be effectually prevented from mixing with the drainage. If the drainage is choked or the plants suffer at any time for want of water, it will not be possible to grow them into handsome specimens, and some of the more choice and miffy plants, such as Hedaroma tulipifera, and nearly all the Heaths are liable to die off through the ill-treatment. Epacris and the early-flowering Heaths will be repotted if possible this week, using only rough fibrous peat; if naturally sandy all the better, as bog peat is not adapted for Heaths and Epacris.

Cinerarias have bloomed well up till now, but as they were looking seedy the plants were placed in a cool shady place, where they will furnish cut flowers for a week or two. Stage Pelargoniums well advanced towards the flowering period have taken their place. In case any green fly should be upon the plants, as a precaution the house has been fumigated. If this is delayed until the flowers open the smoke will cause the petals to drop off.

The never-failing perpetual-flowering Carnations make a grand show, the fiery Proserpine, the flesh-coloured Miss Jolliffe, the Picotee-edged Picturata, and the pure white Avalanche, with many other intervening shades and stripes, give us a profusion of most useful flowers. Cyclamens have been stripped of their flowers and seed pods, and with the Primula amœna have been removed to a cold frame, where they are shaded from the noonday sun.

Roses in pots—Teas and Hybrid Perpetuals—claim considerable attention. In the house, where no artificial heat has been applied, the Teas are just opening their flower buds. Niphetos, with its white shell-like petals, is very beautiful; it is a fine Rose, and but few of the new sorts come up to it. Belle Lyonnaise is a fine hardy Tea Rose; it opens well in the house. Madame Margottin is superb indoors, but opens badly on a wall outside; Madame Falcot and Safrano are best in the bud; Niphetos is also a fine button-hole flower. Mildew and the bud worm have been very troublesome to us; the one has been destroyed by hand-picking, and the mildew by dusting with flowers of sulphur.

FLOWER GARDEN.

Bedding-out was begun on the 12th, although it has been a dry season; the beds not occupied with spring-flowering plants are sufficiently moist, and the weather is in our favour; we plant deeply, and thoroughly water the plants before putting them out. It is almost a pity to disturb the beds of spring-flowering plants; the season so far has been late, and Wallflowers, Myosotis, Silenes, and some other favourites are in full beauty. Placed sticks to Carnations and Picotees; stirred the mould in the pots, and picked off withered leaves. Pinks in beds have received similar attention, and the beds have been watered.—J. Douglas.

TRADE CATALOGUES RECEIVED.

James Dickson & Sons, Newton Nurseries, Chester.—*Catalogues of Herbaceous and Alpine Plants, and Stove and Greenhouse and Bedding Plants.*

Francis & Arthur Dickson & Sons, The Upton Nurseries, Chester.—*Catalogue of Florists' Flowers and Bedding Plants.*

HORTICULTURAL EXHIBITIONS.

SECRETARIES will oblige us by informing us of the dates on which exhibitions are to be held.

CRYSTAL PALACE COMPANY.—Flower Show, May 29th; Rose Show, June 26th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.

COVENTRY.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.

LEEDS.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.

BURTON-UPON-TRENT.—June 16th. Mr. Wm. Shave, Bond Street, Sec.

JERSEY.—Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.

GLASGOW.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.

EXETER (Rose Show).—June 18th. Mr. J. N. Gray, Queen Street Chambers, Hon. Sec.

FAREHAM.—June 23rd. Mr. H Smith, Sec.

STOWMARKET.—June 24th and 25th. Mr. S. Prentice, Hon. Sec.

REIGATE (Rose).—June 26th, 1875. Bushby Britten, Esq., Hon. Sec.

WISBEACH.—June 30th. Mr. C. Parker, Hon. Sec.

MAIDSTONE.—(Roses), June 30th, at Vinters Park. H. Beanstead, Esq., Hon Sec., Rose Club, Mill Street, Maidstone.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

BOOKS (*A. C. K.*).—The "Vine Manual." You can have it free by post if you enclose thirty-two postage stamps with your address.

GRAPES SPOTTED (*H. H.*).—The specks on the stalks are natural, but the spots on the berries are disease. The roots are torpid; water them freely with weak tepid manure water, and put fermenting dung over the surface above the roots.

AURICULA SEEDLINGS (*Manor*).—You are too impatient. You must not expect your Auriculas from seed sown last year to bloom until next year; some, perhaps, not then.

ROSE SEEDS (*G. W. J.*).—Rose seeds will often, if not generally, produce a great proportion of single or semi-double flowers, but the foliage would certainly be different from that of the Dog Rose or Briar, and we certainly should be disposed to think that if your Rose seed sown produced nothing but Briars that the seeds must have been saved from the hips of the Dog Rose; but if by Briars you mean single wildings, they may be the produce of Rose seeds much degenerated.

ANNUALS RABBITPROOF.—"*L. G. S.*" wishes to know of some hardy flowers and annuals that rabbits will not eat. We stated last week all the shrubs they leave unnibbled.

NAME OF ROSE (*R. Maitland*).—It is difficult to say from the specimen enclosed, but possibly it is Thoresbyana, a strong-growing nearly-evergreen climber raised at Thoresby.

FLAT PEACH OF CHINA (*J. F.*).—We are not aware of this Peach being in the hands of any of the nurserymen. If you are particularly desirous of procuring it you will find it in the nursery of Messrs. Simon-Louis of Metz; or you might try Mr. Van Houtte of Ghent.

MARÉCHAL NIEL ROSE (*G. G.*).—The Rose branches or shoots may be introduced into the greenhouse, the plant being in a border outside; but it will be necessary to wrap the stem in winter by a hayband, or adopt other means of protection from frost. Tea-scented Roses do not require close pruning, but only to have the weak parts thinned, and any long shoots shortened-back so as to remove unripe wood. The less pruning they have the more are they likely to flower.

APHIS ON PEACH TREES (*T. S.*).—Syringing is not the best means of clearance, nor is it at all times safe to apply a destroying agent in a liquid form; but fumigation with tobacco is at all times a safe and efficient destroyer of these pests. If one fumigation be not effectual repeat in a day or two, and whenever the insects are seen. If the trees are outdoors the best

remedy is to syringe with tobacco juice diluted with six times its volume of water, containing 2 ozs. of soft soap per gallon. It will not injure the young fruit, but we should not advise it being applied to trees in blossom.

MEN REQUIRED FOR A GARDEN (*Constant Reader*).—For the kitchen and fruit gardens two men will be required, one for the lawn and flower garden, one for the drives and shrubberies, and a journeyman gardener and apprentice or youth of sixteen to eighteen for the houses, with a youth or two or women for leaf-clearing, &c. We have made an allowance of a man for the extra labour and odd jobs, and with these named we think the place you describe could be well kept. The calculation does not include the head gardener, who can always be profitably employed in the higher branches of the art without participating in heavy labour.

TULIPS AFTER BEING BEDDED-OUT (*A. P. S.*).—They do not improve from being grown in this country, but rather deteriorate, from the practice of taking them up before the growth is complete to make way for the summer occupants of the beds. Left in the soil until the growth is complete they are little inferior to imported bulbs. The address we think you want is Messrs. J. Dobson & Son, Isleworth and Hounslow, London, W.

CABBAGES CLUBBING (*Henry Tulk*).—The disease you allude to is the club or anbury, which is caused by a weevil, or rather its larvæ. The plants should be examined at planting, and upon their stems will be found, in many instances, a knob or excrescence, which contains a small white maggot; this being removed the plant may be planted without sustaining any injury. To keep the grub at bay apply a dressing of gas lime to the ground before planting, and point-in with a fork, applying it at the rate of ten bushels per acre. Salt is also a good application, and so is soot, either at the rate of twenty bushels per acre, but the gas lime is the most effectual.

SYRINGING FRUITING STRAWBERRIES (*J. B.*).—They should not be syringed overhead when in flower, and only very lightly after they are set and are swelling, discontinuing it after the fruit commences to ripen; the fruit then to be kept dry, as water resting upon it causes it to spot and decay. Water abundantly at the roots with weak liquid manure.

CLIMBERS FOR WIRE ARCHES (*Idem*).—Clematis montana major, Caprifolium sempervirens floribundum, and Jasminum nudiflorum. Roses of the climbing class are very suitable, as Dundee Rambler (Ayrshire), Princess Louise Victoria (hybrid climbing), and Russelliana (multiflora).

PLANTS FOR A GRAVE (*Eve*).—Few plants are suitable for a grave to remain permanently, as, when not in flower, they have a neglected appearance. It is much better to have changes, though some, as Snowdrops, the blue Squill (Scilla siberica), Primroses—the common and the double forme—the spring and summer Snowflake (Leucojum vernum and L. æstivum respectively) may be allowed to remain permanently; also, Lily of the Valley and Violets, blue and white, double and single, a plant or two of Christmas Rose (Helleborus niger) and Cyclamen neapolitanum, which flowers in autumn before the leaves, the leaves coming up after, and are very pretty. Most of these will flower in the early part of the year, and you may add Forget-me-nots; nice plants with balls planted in spring will flower finely in April and May, and in summer we should have an edging of Silver-variegated Ivy-leaved Geranium, and fill-in the centre with compact dwarf plants of Fuchsias, both light and dark varieties, planting them in the spaces between the permanent plants. They would come off in the autumn, and we should then introduce in the spaces nice little plants of Andromeda floribunda, Skimmia japonica, and Erica herbacea carnea on the margin, with Thujopsis dolabrata, and Cryptomeria elegans in the centre. These will give an interesting appearance in winter, and need not be removed until the summer plants are put in. The subject is so difficult that we should be obliged by information.

PRUNING NEWLY-PLANTED TREES (*T. E. S. B.*).—They, if having long shoots, should have been pruned, but if they had been closely summer-pinched they would not require it. If they have long shoots and have not been pruned—*i.e.*, the shoots shortened, they will be in the plight you describe. On the general question of pruning you are right.

ANTS AND GREEN FLIES (*D. W. W.*).—The ants are said to attack the aphides, but we incline to think they feed upon the sap which the insects cause the leaves to exude. The Pear-tree leaves in your envelope represent the roots of the tree to be inactive. Fresh soil and rich top-dressings we should recommend as a proper remedy.

ASPHALT DRIVE (*L. M.*).—The drive should have a proper foundation of clinkers, brickbats, or rough gravel, and these should be broken up, and a regular inclining yet even surface given before putting on the asphalt. The following receipt is from the "Cottage Gardener's Dictionary:"—"Take two parts of very dry lime rubbish, and one part coal ashes, also very dry, and both sifted fine. In a dry place on a dry day mix them, and leave a hole in the middle of the heap as bricklayers do when making mortar. Into this pour boiling-hot coal tar, mix, and when as stiff as mortar put it down 3 inches thick to form the walk. The ground should be dry, and be beaten smooth. Sprinkle over it coarse sand. When cold pass a light roller over it, and in a few days the walk will be solid and waterproof." A neater appearance is given by sprinkling with spar, yellow or other gravel, which must, of course, be fine, and put on immediately after laying down the asphalt in place of the sand It will bear horses without breaking-up.

CUCUMBERS NOT THRIVING (*H.*).—The atmosphere is probably too dry, and cold air currents have an injurious tendency on the leaves and swelling of the fruit. The ventilation being on the north side only, and having had a prevalence of easterly and northerly winds, we do not wonder at the plants being in the plight you describe. Probably some woollen netting over the opening would mitigate the evil.

MELONS SWELLING IRREGULARLY (*F. H.*).—The fruit not swelling is, we think, the result of imperfect impregnation. There is no remedy but to have a healthy root-action prompted by brisk bottom heat, and to have rather more than twice the number of blooms impregnated upon a plant in one day, and of those you will generally find a sufficient number to swell kindly. When you have three or four upon a plant swelling freely the others may be removed The ligatures you suggest would be ineffectual.

YOUNG POTATOES AT CHRISTMAS (*P. M.*).—There are two, and probably more, ways of having young Potatoes at Christmas. Both cases are met by saving tubers of the preceding year's growth, but treating them in a different manner. The moderately-early Kidneys are best. By the one plan they should be laid thinly in a cool and dry place, the sprouts not removed, and at the middle of July they should be planted in an open situation in rich light soil, and in October they will have formed good-sized tubers, which should be taken up, stored in boxes in dry soil and made firm, keeping in a cool place until wanted, but safe from frost. Others treated as regards the sets in a similar manner may be planted in rows 2 feet apart in a warm and dry border early in August, and these are to be left in the ground until wanted, they being protected in severe weather with leaves and litter. These are infinitely superior than these produced by the following plan. Sets of the preceding year are kept in any cool and dry place, the sprouts are removed as they appear, and at the close of July or early in August they are placed in boxes in light rich soil, with 6 inches of soil over them, or in layers with that amount of soil for each. They should be kept in a cellar, or any place having a temperature of 50° to 60°. In about three months they will have formed tubers without top growth, and of such there is only one conclusion—they are insipid, and not comparable to those grown by the other methods, or to those forced in frames.

PLANTS FOR ROCKERY (*W. Russell*).—Your rockwork will be suitable for the following plants. After they become established they will not require artificial watering, except in an exceptionally dry period. Acæna novæ-zælandiæ, Achillea umbellata, Alyssum saxatile compactum, Arabis albida, Aubrietia deltoidea, Campanula garganica, Cheiranthus alpinus, C. Marshalli, Cistus algarvensis, Cyclamen coum and var. vernum, Dianthus floribundus, Draba aizoides, Ericas in variety, Erysimum pumilum (similar if not synonymous with Cheiranthus alpinus), Gentiana verna, Iberis gibraltarica, Linaria alpina, Linum alpinum, Lychnis viscaria splendens, Orobus vernus, Oxytropis pyrenaica, Petrocallis pyrenaica, Santolina a pina, Saponaria cæspitosa, Saxifraga affinis, S. cæspitosa, S. coriophylla, S. juniperina, S. oppositifolia, S. palmata, S. umbrosa elegantissima, Sedum acre and var. anreum, S. anglicum, S. Ewersi, S. Forsterianum, S. Kamtschaticum, S. pallidum roseum, S. sempervivoides, Sempervivum arachneidenm, S. californicum, Silene acaulis, S. pumilio, Veronica prostrata.

SHADING GLASS (*Idem*).—There is nothing better than a wash formed of whiting and skim or buttermilk to the consistency of whitewash and applied with a brush to the inside of the house roof. It is easily cleaned off when shading is not required.

BEETLE ON ROSES (*W. L. P.*).—The specimens you enclosed were a common weevil, Curculio sulcatus. The best mode of destroying them would be to spread a sheet beneath the bush after dark and shake it. The insects are then feeding and would fall on the sheet.

NAMES OF FRUITS (*J. Mollet*).—Your Apple is Bess Pool.

NAMES OF PLANTS (*Rev. S. A. Brenan*).—Polemonium cæruleum and its white variety. (*W. F. R.*).—An Echeveria, perhaps E. secunda. (*J. S.*).—Bougainvillea spectabilis. (*Thos. Perry*).—1, Pulmonaria officinalis; 2, Omphalodes verna; 3, Euphorbia amygdaloides; 4, Myosotis sylvatica (*Inquirer*).—Apparently Prunus virginiana. (*C. W. M.*).—The Wych Elm (Ulmus montana). (*A. B.*).—Rosa Banksiæ. (*B.*).—Specimens quite insufficient. "Grains of Paradise" are the seeds of Amomum Meleguetta. (*C. B. H.*).—1, Melalenca sp.; 2, Lantana sp.; 3, A better specimen would oblige. (*P. W.*).—Gongora atropurpurea, *Hook.* (*Bot. Mag.* t. 3220).

POULTRY, BEE, AND PIGEON CHRONICLE.

COTTAGERS' SHOWS.

SURELY the price of chickens for table use has reached its acme. The other day at a fashionable watering-place we were asked 10*s.* 6*d.* a couple for spring chickens. When we hear of these prices we can only think the demand must enormously exceed the supply. Of course 10*s.* 6*d.* was a fashionable price, the ordinary market charge being about 8*s.* or 8*s.* 6*d.* a couple; but even supposing the price was 7*s.* 6*d.*, what a help a brood or two of early birds would be to a cottager!

This year chickens have been very scarce; but in most years the cottagers and small farmers in Sussex are able to rear early broods, which help to supply our London markets to a great extent. The higglers go round to the villages, and buying up the birds take them home to fatten; but even the Sussex cottagers know that chickens are valuable, consequently the higglers have to pay pretty well for the early spring birds.

Sussex is not the only county where there are country lanes and open common land. Chickens can be as well produced in Hampshire, Kent, Surrey, and other counties as Sussex, and we wonder more is not done towards encouraging our cottagers to add by this simple method a few shillings to their weekly receipts. We are sure many can easily keep four or five hens, and have a good profit from them, their cost of keep in a country home would be so trivial, that the greater part of the receipts would come on the profit side. There are some who think that cottagers can cultivate poultry for their own use as an economical and cheap food in these days of dear mutton and beef; but this we do not believe, for if once a cottager tried to do this he must keep a large number, and this would in most cases end in ruin. We have so often been shown that where five hens can be kept profitably ten will not pay; but we do believe that while chickens realise the good prices they do it will always be very profitable for our cottagers to keep a few birds. The early eggs and early chickens will find a speedy sale, and be the means of procuring many a little comfort which otherwise could not be afforded out of the weekly wages. We believe everywhere fowls are becoming more numerously kept by the labouring classes. In the north we know they are, and we hope so, too, in the south. We think if those who have the power of doing so will only help the cottagers to see what an advantage poultry would be they would be helping in a good work. We are sure village shows afford a capital way for exciting the love of poultry about the cottage homes. We know of a few villages in one corner of Sussex which club together and have a regular annual gala day. It is often impossible for one village to manage a show, but three or four can work together, and select for their committee members from each, and then hold

the shows in the different villages by turn. We are convinced such shows are appreciated, and help on the cultivation of poultry among the poorer classes. We would not restrict such exhibitions to poultry only; far from it, we would make them embrace everything that is interesting to a country life, and give prizes for fruit and flowers, best-kept gardens, window flowers, honey, bread, butter, needlework, and everything in which members of a cottage home can take part. It is in the southern counties especially where such village shows would do good. The men are principally labourers, earning but just wages enough for bread and butter. In the north the manufacturing districts hold out such a pleasant tariff of wages that the poultry fanciers there are able to compete, and do so successfully, at the many local shows for which Lancashire and Yorkshire especially are so famed. We hope some of the leading people in villages and country parishes will take up the matter more, and see if they cannot help on some such shows. Perhaps a few particulars of the little show held in the corner of Sussex, to which we before alluded, may be of service.

The district for competition is open to eight villages. Anyone from those parishes may compete, and to encourage the cottagers to exhibit as much as possible, no entrance fees of any kind are charged. We believe when this little Society first started, some kind and influential tradesman offered his services as Hon. Sec., and to him its success is to a great extent attributable. Consequently, in forming new societies we would especially advise an able business-like man being chosen if he can be found to fill this post. Then a Committee was formed of two or three tradesmen out of each village, who appointed the most central place for their committee meetings, and so started their Society. Of course they could not do much without money aid, but every one was glad to subscribe his or her mite to such a good purpose, and the Committee, members of each village, collected from their own gentlemen, tradesmen, farmers, and cottagers. Subscriptions and donations were given as small as 6*d.*, and very few exceeded 10*s.* even from the wealthiest landed proprietors; consequently no influential squire is absolutely necessary to set this sort of show going. The inhabitants of one village are as well able to do it as those of another.

We find from last year's balance sheet the eight villages of this Society made up in donations and subscriptions £93 10*s.* 6*d.* The largest sum collected from one village was £20 0*s.* 6*d.*, and the least £2 11*s.* 6*d.* The greater part of this sum was expended in prizes—viz., £85 15*s.* 6*d.* They were not of themselves valuable premiums, but were many in number; a cottage loaf, a patchwork quilt, a lettuce, and a Dorking cock had all chances of winning the same sum of money. These good people make it a regular gala day; most of the farmers give their men a half-holiday, and all have to pay 6*d.* to go into the showyard from 1 to 4 P.M., and after then 3*d.* The amount taken at the gates in these small sums came to £54 18*s.*

It is important to have such a show held in a suitable place. Most villages, however, have some squire's park, and if permission can be obtained for the show to be held in them the pleasure is even much greater for the visitors than if it was held in a field. The gentlemen who kindly give the use of their grounds for the meetings of the Society about which we have been writing also throw their gardens and private walks open, so the day is really looked forward to by all the villagers as *the* day of the year.

There are, of course, expenses, such as hiring pens and band, labour, printing, postage, &c.; but these should be covered by the gate money, while the money collected in subscriptions is spent in the prizes. The report and balance sheet this Society have just issued is their sixth, and by it we see they have a balance in hand of £28. There are such things as wet days even in August, so it is well to have a reserve fund.

As far as the results of the poultry department of this Exhibition go, with which we are here most nearly concerned, we know from experience that it has worked much good. Not only do the cottagers in very many instances now keep a few birds who never before had a feather, but they keep a better class of birds and of more profitable breeds—Brahma-Dorkings and Houdans for spring chickens, and Hamburghs for laying. We know of many cottagers who have gone in for their few chickens and made a good thing of them; and what one can do all can. We do not advocate the subdivision of classes for such shows, but there should be classes for Dorkings, Brahmas, Cochins, two kinds of Hamburghs, French, and Ducks. These could be more subdivided, but those classes which we have named we consider essential, and we believe when the operations and working of such associations are better understood there will be annually a still further increase in the number of exhibitors. We do hope that some kind patrons will come forward and try to start such village exhibitions in places where they do not already exist, for we are convinced that by stimulating the energies of the cottagers in this way great good will ensue.—W.

Early Swarming.—I have seven stocks of bees from which I have two large natural swarms, one on the 1st of May, the other on the 8th.—Thos. Corney, *The Gardens, Eden Park, Claines, Co. Limerick.*——On Friday last, May 14th, a friend of mine at Ashton-on-Mersey, six miles south-west of Manchester, had a swarm of bees. To-day, May 17th, I also had a swarm. I am six miles south-east of Manchester. Both swarms English or black bees.

CHICKENS FROM EGGS ONE THOUSAND AND TWO HUNDRED YEARS OLD.

The Paris correspondent of *The Nation* states that the guests of the Abbé Denis, curate of the parish of St. Elio, in the Faubourg St. Antoine, dined a few days ago on fowls whose immediate ancestors figured, he says, on the table of the great Frankish King Dagobert. When the Abbé Denis laid the first stone of the church and presbytery he has built by his own exertions on the site of the old château and gardens of Dagobert, a hen's nest full of eggs was discovered beneath the ruins of the ancient building. These eggs were twelve hundred years old, and were about to be thrown away by the labourers, when the Abbé, remembering that wheat had been grown from grain found in Egypt in mummies dated back from the time of the Pharaohs, bethought him that possibly there might still be life in these eggs. A *savant* of the Institute, consulted at once in reference to these precious relics of an age when there was as yet no France to detest "perfidious Albion" or to be jealous of Prussia and needle-guns, advised they be forthwith confided to a hen of approved success in the maternal capacity. This advice having been acted upon, the good curé and his friends had the delight of witnessing, twenty-one days afterwards, the hatching of a fine brood of chickens, the direct progeny of the denizens of Dagobert's barnyard. The fowls thus obtained have been carefully kept from any *mésalliance* with their congeners of less ancient blood; and the Abbé has now a yard so well replenished with "King Dagobert's fowls" that he not only supplies his own larder with poultry of this illustrious breed, but is about to organise, at the suggestion of numerous friends, a sale of "King Dagobert's eggs" for the benefit of the poor of his parish.—(*National Agriculturist.*)

MR. BULLEN'S POUTERS AT HOME.

The name of Bullen is but a new one among exhibitors of fancy Pigeons, but it has come very frequently to the front the last few years. Still, although new as an exhibitor, Mr. Bullen has, to use his own words, "been a Pouter fancier his whole life." When I found that a Bath clergyman had taken high honours with his Pouters at such Shows as the Crystal Palace, Bath, and Bristol, &c., I felt a great curiosity to see how he, a resident in Bath, managed to keep his birds. Hitherto among English amateurs of higher social position I had always, and I think only, known clergymen and other gentlemen as country dwellers; but here was one who resides in Bath, not in a villa near, but actually in the city of Bath—close to historic Pultney Street, and who keeps his Pigeons there, and is yet a successful exhibitor. Offering a visit to Mr. Bullen when meeting him at the Pigeon fanciers' levee, the Crystal Palace Show, an offer kindly accepted, I wended my way one day last winter (what a comfort to be able at length to talk of the winter as being past!) to Edward Street, Bath, where Mr. Bullen resides.

The Pouter, as most of my readers know, requires quite different treatment to any other Pigeon. Like a baby, if he is shy he is not worth looking at; and as a baby must see company, and be talked to, and drawn out, so must a Pouter. He must be familiar to sauciness; far from being afraid of you, be pleased and proud to make your acquaintance. In short, he must be made a companion of in order to be companionable. To achieve all this and keep his birds in show Mr. Bullen has given up a room in his house to them—a room looking to the back, which with another tenant would have been the housekeeper's room. Here live the Pouters in state, in pens of goodly proportions; and through the opened window they can pass into a wired enclosure, the whole space of a town garden being appropriated for their flight. Surely no city-living Pouters were ever better cared for. The room immediately below the one in which live the Ponters—a cellar in fact—is occupied by the feeders, which also have their place of flight as well. These feeders are good-sized Runts, their size being kept up by an occasional cross with a prize bird. These good-tempered big Pigeons—(big people are generally very easy and kindly, in contrast to fiery little folks)—Mr. Bullen finds the best of feeders, giving an abundant supply of food, and so much better than the birds recommended for feeders by the old books—viz., Dragoons. These, like their great uncles the Carriers, are a very quarrelsome variety; and then with such a dagger of bill a Dragoon is a powerfully armed foe, and can rip up a poor helpless bloated Pouter as easily as a Roman soldier did a bearded Jew at the seige of Jerusalem—holding the Jew by the beard, and using his straight, piercing, dagger-like sword. Poor helpless Pouters! at the mercy wholly of the fighting well-armed Dragoon. But the kindly portly

Runts, perfect monthly-nurses in feathers, see well after the Pouter babies and do not injure their parents.

Now, good readers, let us in thought enter what I will call Mr. Bullen's Pouters' parlour, for a papered room in a Bath house is too good to be called a Pigeon loft. Around at a suitable height for inspection—that is, about the height of a table, are arranged the spacious pens in which at the time I saw them the birds were confined. Some of the pens are made of smooth round bars of wood; these Mr. Bullen prefers, as they, unlike the wire, cannot injure a feather. Others are of the usual wire, but of different shapes and sizes. Mr. Bullen keeps his birds warm—this is a great point—and they are healthy. The food usually given is peas and tares, in the show season Indian corn and beans. Sand and gravel are at hand. The sexes are separated in the winter season, a plan which is, I believe, on the whole the best. I forgot to mention that the pens are 22 inches in height, and 2 feet broad and deep. An open space is in the middle of the Pouter parlour.

Now let me mention some of the occupants of the pens. There is the Black cock first and cup at the Bath Show, with rose pinion of great beauty, with Black hen for mate: these are a splendid pair. Then came a fine Blue pair, hen quite a young thing, but such a globe and limb! A White cock, again, of very great beauty, and a Black cock of wondrous metallic plumage. There is, too, the Palace first-prize hen and the Oxford Blue hen. Mr. Bullen started this season with well-matched birds for breeding—four pairs of Blues, two Blacks and one White, also a Yellow cock and Red hen. Here were the chosen birds to produce progeny for future triumphs.

All men have not a turn for Pigeons, but those who have and are compelled by profession to reside in a city, may take example by Mr. Bullen and see how they can utilise their space and have and enjoy their pets. I could not help noticing anon, what I had often noticed before, how different to all other Pigeons is the Pouter. Not alone his upright, man-like form—for this bird does stand up like a man and look at you—but how unlike other Pigeons he is in gesture and bearing. They as a rule are little flyaway birds; he stands, and stares, and struts near you. How companionable the fellow is; what a social fellow he is; how much more there is in him than in others. He keeps one from being dull, for you cannot feel alone in his company. Mr. Bullen's "Pouter parlour" is a great success, so is his cellar full of Runts. By the way, how Sir Wilfred Lawson would rejoice in such a use of a wine-cellar. Softly-cooing, loving Pigeons" he would say, "where once lay, like drunkards, the full bottles." I think he would introduce Mr. Bullen's cellar to the notice even of the House of Commons. I have heard of a clergyman who said he used to go out and thin his grapes between the heads of his sermon. Perhaps Mr. Bullen finds petting his Pouters equally useful, and after a run into his "Pouter parlour," there come to his mind and pen

"Thoughts that breathe, and words that burn."

I wish Mr. Bullen every success with his birds, and am glad indeed to see another exhibitor of the noblest of Pigeons take a deservedly high place at our exhibitions. I had seen Mr. Bullen's Pouters abroad, and was even more pleased to see them "at home."—Wiltshire Rector.

ENGLISH OWLS.

I wish to say a few more words in answer to "Wiltshire Rector." I uphold that I was entirely right in the reading of Moore's remarks on the Owl, that when he says that in "make and shape" it is like the Turbit he means thereby that in "make" it is of the same size, in "shape" of the same outline. I can easily see that there may be diametrically opposed opinions on Moore's words, and they caused me a good deal of thinking before I gave my opinion of them, but what decided me was the fact of his using two words together that at first reading appear synonymous. Had he used "make" only I would have thought he meant to indicate shape or outline, but putting it as "make and shape" I feel sure he meant to imply that both in size and lines the Owl of his day was like the Turbit. Mayor evidently thought so also.

The Rector next speaks of climate influencing size, and mentions Indian Fantails. I have not time to go thoroughly into this matter at present, but will merely say the Scotch Fantail may have been bred smaller since Scotchmen took him in hand, and there may be in India Fantails not half as big as other Fantails there, and all sorts of sizes in between. I can assure the Rector that in India there are as big and as little Pigeons as there are in this country, and that it is the breeder's art and not the climate that has made them so. Wild, or semi-wild Blue, Blue-chequered, and Mealy Pigeons in India are exactly similar in size to their congeners in the north of Scotland.

The Powdered Owl is a pretty bird and will have admirers, notwithstanding what may be written against him. He is not pure bred, however; he is either crossed or has degenerated into coarseness. That is quite apparent when he is put side by side with only a fair specimen of the African Owl.

In conclusion, I shall be very glad to acknowledge any mistakes I may make when convinced of them, but the Rector will excuse me if I cannot see so clearly as he seems to do. His remarks on "make and shape" do not at all agree with my ideas. I think he stretches words to suit his case. I leave Moore's words to be rendered by others.—J. C. Lyell.

[This controversy may now be closed.—Eds.]

SELECTION.

So many inquiries reaching me referring to the art of selecting birds for breeding, have induced me to throw into form the results of my theories and experiments. Without argument or any intention of arguing, I shall say I firmly believe that all the varieties of Pigeons have descended from one original source; therefore, to my mind, the breeding of Pouters, Carriers, Fantails, &c., from the common Pigeon is a simple fact in nature, depending upon selection extended over a period of time. Having satisfied myself with regard to the truth of the general principle, the minor changes and differences, such as those of colour (as among Toys), beak (as among Carriers and Barbs), shape and heads become easy problems, the truth of which can be demonstrated, and is demonstrated every day, in the lofts of every Pigeon fancier.

It is not necessary for one to be told when he sees smoke there is always fire; he knows that, because in his experience fire is always the cause of smoke; so when one sees a key it suggests the lock. Now, in all the varieties of Pigeons one recognises all the parts of the common Pigeon, and not only do we recognise the parts, but, as at school we used to do our sums backwards to prove them, so do all the varieties gradually recede or degenerate into the common Pigeon when neglected by the power that selected and stamped them as varieties, thus proving themselves descendants of the commons. Pouters become smaller and smaller when allowed to intermingle, Carriers lose in wattle and size, Fantails drop their tails, and Tumblers become coarse.

Thus believing, I see numerous possibilities, and have, by direct experiment, satisfied myself and friends with regard to many of them. That all the Toys are but modifications of colour applied to the common white bird is evident to anyone, as is the application of the key to the lock; and there is not so much difference in the markings as one would suppose at first sight; for instance, the Spot, Helmet, Swallow, Nun, and Magpie all have black heads in easy gradation one to the other. The Spot, Helmet, Nun, and Magpie have black tails; the Swallow's tail has become white; while it, the Helmet (until lately) and Nun retain the black wings. The Owl, Turbit, and Jacobin are also not many removes from the common, though the heads and bills are more evident departures than the mere colouring. As we reach the high fancies the differences become more extravagant, and in the wattled birds we see the beak of the common greatly enlarged, as is also the cere of the eye. The head is moulded to a long and narrow form, or shortened and thickened. In the Pouter we see the common enlarged in all its proportions, as in the Tumbler it is diminished. We know that these removes from the common specimen are the products of mankind by the evidence (history) of the last hundred years, and by the changes in colour, shape, and size that accumulate in everyone's loft, and that need but a little encouragement to bloom into new varieties.

Colour is the easiest of all distinctions to fix. Five or six years will enable one to obtain almost any marking he wishes. And I will give an illustration of one thing I have done within the last few years: I wished to obtain white Fantails with black tails, and there was no way but to breed them. I first crossed with the Nun, and spent several years manipulating the crosses, but without obtaining satisfaction. Some of the birds were fair, and if I had been patient I should have obtained all that was wished; but steaming ahead in true American style, I found a sport in a friend's loft; it was a black hen with white breast and head. This bird was procured and matched to a fine white cock, and their young were white, black, or speckled, with now and then one with the colours nearly where I wished them. Those which were nearly perfect were matched together, and my efforts were to have the line of division between the white and black as near the tail coverts as possible, and to prevent foul feathers appearing. The fouls were tenacious, and it was some time before I got rid of them and succeeded in breeding a perfect bird. Had I continued with the first lot there would not have been so many foul feathers to contend against; but the carriage would have had to be carefully bred for; as it was, the birds were much admired, and were a source of satisfaction as long as they were in my possession, not so much because of their rarity as because they were the products of an experiment that was much laughed at by knowing fanciers, who invariably predicted failure. I also started a strain from a couple of sports, from yellow and white stock, afterwards discovering a snell ancestry.

To change a physical conformatio requires more time and

much patience. The beak and wattle of the Carrier, for instance. is theproduct of many years, the greater part of which was lost, by gropings in the dark; and I think from what I know that fanciers of the present day could develope by selection and matching from ordinary wattled birds two distinct strains, Long-faced and Short-faced Barbs, that in a moderate period of time could rank with either the Carriers or Barbs that have been the products of the last century. At the time Moore wrote the beak of the Carrier was good at 1¼ inch. The haphazard selection of fanciers has increased it, and birds with 2-inch beaks are at present the standard. Now, it was much harder to add that last half inch than to produce all the other distinctions of the head as they existed in Moore's time, and the last sixteenth of an inch was more difficult to produce than any half inch nearer the skull; yet all this has been done almost in our day, and proves by analogy what a scientific fancier guided by the light thrown by the development of species can do. The beak of the Barb is not much shorter than that of the ordinary Carrier of Moore's time. Many of the coarse birds we see will measure from 1 inch to 1¼ inch, yet they are called Barbs because of the down face, all the other conformations belonging to and being identical with the Carrier. Desirous of satisfying myself with regard to the possibility of developing the Carrier and the Barb from the same forefathers, I once instituted a series of experiments. The increase of the Carrier's beak from the common's beak of 1 inch to the high fancy beak of 2 inches is a problem, to prove one part of which necessitates the acceptance of the whole, and so of the diminution and change of outline of the Barbs. Wishing to simplify my labour I bought a pair of ordinary barbed birds, the beak of the cock being 1¼ inch, and that of the hen a little less in length.

From the young of these I selected three lots, the largest best-wattled for a strain of Carriers, the smallest for Barbs, the others to breed back to commons; the last were allowed to fly, but not to mingle with commons or others. My experiment was interfered with by circumstances over which I had no control, but not before I had obtained the following results: the average length of beak in the first lot was increased a full eighth. I bred a great number of this lot, and crossed as far apart as I could, knowing it was the hardest part of the problem. The second lot was interbred as closely as could be, and a refined-looking wattled bird with small beak was the result, a much better appearing Barb than most of those we see. The flying lot became Dragoons (on the road to commons), as all wattled birds do when allowed to care for themselves. Here were three lots of birds springing from the same parents, presenting at the end of a few years distinctions enough to entitle them to be marked under three different names, and these changes caused by the selection and matching of specimens possessing certain properties.

I was perfectly satisfied with my experiment, and accepted the result as the solution of the question, Were Barbs and Carriers offspring of the same ancestors? Anyone desirous of satisfying himself with regard to the system of philosophy now paramount in the realm of thought would do well to institute some such experiments as here detailed. Do not take for granted all that is said for or against the theory that variation and selection are the origin of varieties, and through them to species; but test some part of the hypothesis for yourself, and judge calmly and decidedly of the evidence. Words are of little use for or against, and philosophers may wrangle or fanatics fulminate, as Nature, regardless of their word-wisdom, lays at their feet proof after proof of their blindness.

A pleasant experiment of what may be done by selection would be the improvement of Barbs. In the first place determine the points to be bred for, then select the strains approaching nearest, and give yourself up to the full enjoyment of a partnership with nature. The points are, short, broad, and down beak, broad head, well wattled eye, slender neck, and small size (see August number of *Bulletin*). You have a pair of well-wattled Barbs. Should you breed in-and-in or not? Suppose we say no, and take, in preference to in-and-in breeding, the liberty of crossing with Tumblers. There is a variety of small yellow Tumblers that is not a long remove from the Barb which can be used; but the best crosses are with coarse specimens of the Short-faced Tumblers, that variety having the slender neck, broad head, and small body which is desired in the Barb. Match the cock Barb with the Tumbler hen, and *vice versâ*. From the young of these two pairs select those which show the most Barb characteristics attached to the smallest bodies, breed some of them together, and then match a pair of the smallest most Barb-like young (grandchildren) with the old Barbs if necessary, to increase the wattle, which may be partially lost. Or, if you have a good strain of Barbs, you can introduce one Tumbler, and cross its progeny with the rest of the Barbs, and after a year or two repeat, until the size is obtained without any material loss of wattle or time.

Hundreds of experiments can be suggested whereby one, so aspiring, can improve one's knowledge; but, as nature is an open book, of which life teaches us the vocabulary, we suspect fanciers will soon read its columns more intently, and look at the pictures less, thereby finding elements for their own experiments.—Dr. W. P. Morgan, *Baltimore, Md.*—(*The Pet-Stock Bulletin.*)

[This is a very high-class article of Dr. Morgan's, and raises the fancy into more scientific atmosphere than usual. I am glad to find that Dr. Morgan accepts the scriptural account of Pigeons being descended from one original pair. In this he is also confirmed by Darwin, whose experiments went to prove this true. Recently I saw two stuffed specimens of Barbs, which were at least forty years old. They were the property of a very aged fancier now deceased. Being under glass they were in a good state of preservation, and are wonderfully long in face—quite as long as the Barb represented in Girton's "Pigeon Fancyer." On seeing them I could not help thinking that the Carrier and Barb are nearer cousins than many imagine. One of the two stuffed specimens had a tuft at the back of the head, as was usual some years ago, and gave the bird a jaunty look, which was to my eye pleasing, though detrimental to the effect of the peculiar shape of head required in the Barb.—Wiltshire Rector.]

LONDON FANCY CANARIES.—No. 3.

As I have before mentioned, "London Fancy" birds much resemble "Lizard" birds in their nestling feathers, and possess in the like manner either perfect or broken caps. If a "Lizard" bird has a broken cap that defect cannot be obviated by the moult; the blemish will be apparent during life. If a "London Fancy" bird possesses a broken cap in its nest feathers, it is no bar to its being exhibited when having passed through the moulting process. All appearance of defective cap is lost when the body feathers become clean or light. This marked difference has ever led me to believe that the "London Fancy" is a distinct variety, and is not a made-up bird through crossing-in with "Lizard" and "Norwich," as many fanciers suppose and have asserted the same to me. I know well what the crosses are betwixt either breed. The young certainly make handsome cage birds, but to breed pure "Fancies" or "Lizards," pure stock must be bred from.

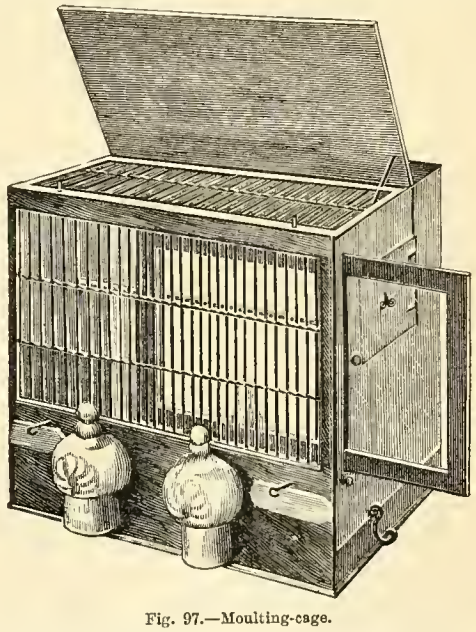


Fig. 97.—Moulting-cage.

When young "Fancy" birds have attained the ages of six or seven weeks they should be caged-off separately in the box moulting-cages, in which they will remain until they have entirely finished moulting. If the birds are not moulted singly they will very likely pluck each other, and the feathers will grow-up dark or ticked, which are considered blemishes in exhibition specimens.

Each moulting-cage should be furnished with water and seed-fountains, with a couple of perches inside the cage, one across the centre of the cage, and the other in the same direction, only lower down near the front of the cage where the bird partakes of food. Be sure the perches do not cross each other. A couple of slide-tins for the food should likewise be provided, and should be inserted in apertures in front of the cage. In these tins are to be daily provided a continuous supply of egg and savoy cake (finger-biscuits), during the whole of the moulting period. Use only the yolk of the egg with the cake, which can be prepared

for the birds by first pressing it through a sieve and then mixing the two ingredients together in a piece of parchment about a foot square, which can be kept in company with the sieve in some handy place for use each time they may be required. This way of preparing the food is preferable to chopping it with a knife.

The cages I have used for moulting my "Fancy" birds in are of London pattern; in fact, they originally belonged to a fancier named Boakes, and were obtained for me by a noted breeder named Hook, of Walworth, Surrey, from whom I obtained a wrinkle or two in the mysteries of "London Fancy" birdology, especially the moulting and washing processes. I was a Lizard breeder to some extent at that time, and my friend and myself entered into a reciprocity treaty to exchange bird notes, and not only this, but I inducted a real bird enthusiast in Derby named Orme (father of the present exhibitor), into the London Fancy school. The fanciers I have above referred to died long since.

In shape the moulting-cages are mostly about 1 foot square, excepting when they are extended in length with a mid-partition for holding a couple of birds. Single cages, however, are much handier. The wood of which they are constructed is mostly of mahogany, the hard close kind is preferable to softer wood, which is more porous. Much taste is often exercised in the construction of the moulting-cages, some of which are beautifully inlaid with fancy wood about the front parts. I have a couple by me prettily inlaid and veneered. One-half of the roof or top part of each cage is made to open or lift-up, beneath which is a wired frame to fit the aperture used when the lid is up for the purpose of examining the birds during the various stages of the moult.

The front of each moulting-cage should be closely wired, there not being above half the space betwixt each wire as in a show-cage. There is a necessity for the close wiring, for if when drawing a glass slide which extends along the inner side of the wire front, and again closing-in the slide, a bird should by chance protrude its head between the wires, an accident might soon occur. The close wiring prevents this.

As the young "Fancy" bird becomes more habituated to the moulting-cage, the glass slide is gradually closed. When the bird has attained the age of sixteen or eighteen weeks, and has been well attended to with the egg and cake, and the cage during the time kept well closed, a bird bearing a beautiful rich plumage—very different to that it bore when first introduced—will be found. Every attention must be devoted, for neglect of food will tend to keep back the bird, and the food must be fresh daily, and care taken that the tins be occasionally scalded and kept scrupulously clean. Great care must be exercised when cleaning-out the cages, for the displacement of a dark wing or tail feather will tend to somewhat deteriorate a bird for show. The least the birds or cages are meddled with the better during the moult.

The introduction of the new pepper diet has induced some to adopt it for the sake of imparting more colour. I have always noticed in pure-bred high-class specimens of the "London Fancy" breed, a rich and beautiful silky virgin appearance of bloom, especially noticeable in the buff or mealy kind, but which to my thinking becomes somewhat marred when the birds have been moulted upon the cayenne diet. If the colour by the use of pepper is more intensified, still to my mind the general beauty of the bird is not improved. I know the idea with several fanciers of late has gained ground that if a bird can be brought to a certain pitch of colour, it is deemed all-sufficient to rank it as an A1 bird. This is a mistaken one-sided notion. There are other matters of vast importance. Quality of feather, purity of blood, and elegance of shape, must not be lost sight of, for if the breeders in general lose sight of selecting proper specimens for breeding purposes, and judges lack in all other considerations but high colour, then the fancy will be taking a retrograde movement, and undoing that our forefathers have been aiming at—viz., "Improving the breed of Canaries." With cayenne-pepper-moulted birds colour much depends upon the quantity of pepper a bird swallows.

Just to show the restrictions placed upon breeders of the "London Fancy" birds, I quote the following rule from an old book of rules in my possession:—"Rule 13. That no member be permitted to feed his birds with anything but bread, egg, and savoy biscuits, all descriptions of seeds, and green meat of every kind; that no marigolds, saffron, or dye of any kind be permitted to be used on any pretence whatever, on pain of expulsion." Their chief aim evidently was, as stated on the title page of the book, "For promoting improvement and beauty in the breed of fancy Canary birds."

Experience of late has fully decided the matter in my mind, that a pair of birds for breeding purposes should be selected from stock not brought-up to a certain bright colour with pepper. —Geo. J. Barnesby.

SALEABLE HONEY.

It is one thing to raise honey and another thing to sell it, and with some persons the first process is often easiest. Now having in view the three announced apiarian exhibitions of this year I think a few words on this question will not be out of place. At the Crystal Palace last year, I am sorry to say, the greater part of the magnificent supers exhibited were returned to their owners unsold, for the simple reason that they were too large to carry away, as well as too costly, for most visitors would be honey buyers. In fact the smaller the super the more likely was it to be sold. The Americans, who are extensive honey-raisers, long ago discovered this, and have hit upon a contrivance by which their honey is brought to market in the most saleable form, and immense quantities are produced. The agricultural and bee-keeping journals teem with advertisements of wholesale honey-buyers. So it would be here. Let the honeycomb be sent to market in the most saleable form, and customers would be readily found, for nice clean well-filled honeycomb is duly appreciated by the wealthy classes, and 2*s.* or 2*s.* 6*d.* per lb. is not begrudged for it.

At the New York State Fair, we are told by the American "Bee Journal," that "the main strife among competitors seemed to be mostly on box honey, as to what style of box is best, all things taken into consideration. The variety and styles of packages attracted much attention, and as there were competitors from different parts of the State the display was not only attractive but practically instructive. Mr. Tennant's sample was in old style of boxes, and though of creditable appearance not quite up to present requirements, the packages being too large to bring highest market prices, so with Mr. Griswold's sample, nice honey, but not in shape to call purchasers' attention. Mr. Bettsinger's was in narrow sectional boxes, I believe the same as advertised and sold by himself and Mr. G. T. Wheeler, largely in use and known in New York State as Syracuse style. As Mr. Bettsinger's were nicely cased, they showed to the best advantage, and could be very convenient for retailing purposes, and Mr. Hadsall's sample hung in frames similar in size to Mr. Bettsinger's boxes, but not as tastily put up, yet well arranged to show all the merits in that way of getting surplus. Mr. C. R. Isham's boxes were wood tops and bottoms of any desired size and of any kind of timber, some polished off in fancy style, some merely planed smooth with glass sides and ends, held in place by angular bright tin corner pieces pronged to pass through the wood and clinch, making as strong and nice a box as could be desired by the most fastidious, and profitable to the seller as they can be manufactured, about as cheap as almost any style of glass box. Part of Mr. Isham's box was in small single-comb plate boxes 6½ by 2½ inches, and weighing about 2½ lbs. gross, the ends showing the pure liquid honey in cells built against the glass, while the sides gave a view of the white-capped comb in all its beauty and purity."

The first premium was awarded to the honey in the glass boxes above mentioned, and exhibited by Mr. C. R. Isham. I see Messrs. Neighbour & Son have already advertised a sectional super to supply the required need, and perhaps they or James Lee may be induced to place before us some like Mr. Isham's above described. Bee-keepers have abundance of ingenuity, and I have no doubt we shall find exhibited at our September show good marketable supers.

Now a few words on run honey. Much of that shown last year was very dark, made to appear still darker by being stored in green glass jars or bottles. White glass is not much more costly, and the extra expense will be amply repaid by increased sale. Remember, honey is to be eaten, and so should be put in an enticing form. The British Bee-keepers' Association hope for the benefit of bee-keepers to hold a honey fair, but I think it unreasonable to expect us to weigh up run honey by the pound, or cut out combs from large supers.—John Hunter, *Eaton Rise, Ealing.*

BEES REMOVING EGGS FROM ONE CELL TO ANOTHER.

For more than thirty years we have been telling bee-keepers that queens lay far more eggs than they set, or have time to set, and that working bees assist them in this work of distribution and setting. The statements made have been frequently disputed and doubted. The late Mr. Woodbury wrote me privately for evidence on the point, and last year even Mr. Lowe himself ventured to assert that bees do not remove eggs from cell to cell. When he made that assertion he was invited to call here and see for himself ample and satisfactory evidence of the fact that bees do remove and reset eggs. In another periodical we find a paragraph touching this question, which gives me pleasure to transcribe for the instruction of the readers of this Journal.

Mr. W. Bassano, Haden Cross, Old Hill, says, "Last year I made a four-comb nucleus for queen-raising, and for some reason the bees did not attempt to make a queen till the larvæ were too old. I then gave them a bit of comb with eggs, and again they did not care to make a queen. Disgusted with their improper conduct, I did not trouble with them for some weeks, when, having a spare combful of larvæ and eggs, I thought I would give them another chance, so introduced it into the middle of

the box. On looking at it next day, they had commenced several queen cells, and had carried the surplus eggs into the adjacent comb; not only into the cells on the side next to the brood comb, but also carrying an equal number into the cells on the other side, just as a queen having laid some eggs on one side of a comb, always (I believe) goes round and lays an equal number on the other side. No doubt for economy of heat. I was surprised, however, to find the workers carry the eggs so far, and show the same instinct in disposing of them as the queen does."

"Egg-carrying," says the editor in a note appended to Mr. Bassano's letter, "has frequently been observed, but is often disputed. We can, however, vouch for the fact."—A. Pettigrew.

HINTS FOR THE MANAGEMENT OF SMALL APIARIES.

One of the difficulties which at this time of year presents itself to persons who have as many stocks as they want, but who wish for the utmost produce of those stocks in the form of honey, arises from the natural inclination of bees to swarm. Now swarms are all very well for those who want them, but a real trouble and nuisance to a number of people who do not want them. Year after year the difficulty recurs. Everything goes well up to a certain point, and then all is changed. Here are three or four splendid hives as busy as possible, giving promise of no end of honey. Supers are put on in due time, they are being beautifully filled; another week and the rich spoil will be garnered. But, alas! off goes a swarm; every bee in that swarm has taken a good bellyful, and the super is perceptibly emptier and lighter than it was yesterday, and not full enough to be taken. What is to be done? What ought to have been done to prevent this disaster? for disaster it is most assuredly. If the swarm had not issued there would have been so many more bees at liberty to collect the honey which is sure to be abundant sooner or later; whereas now a larger number of the bees will be required to attend to the young brood of two nurseries, and much of the honey will be consumed in the new hive in making the combs, while the diminished population of the old stock will be consuming at a rapid rate the stores actually accumulated; and what if second and third swarms follow? Not to speak of the frequent loss of the prime swarm itself, although, as it was not wanted, its flight under the circumstances is almost a relief.

Now the picture I have drawn of a distressed bee-keeper is no uncommon one. It is the experience of a multitude of persons who love honey and long to produce it, who keep a few hives for the purpose, and often have no honey at all after years of patient waiting. Can nothing be done this present season to save them from disappointment?

First let us see what can be done to prevent swarming. Of course we cannot always prevent this. Some years bees will swarm in spite of all precautions. Still, no doubt, we can ordinarily prevent it. The remedy is simply to give the bees abundant space for breeding and storing honey, with ample room for comfortable egress and ingress, and facility of ventilation. For this purpose a gradual enlargement of the hive collaterally with a corresponding gradual enlargement of the entrance in the same direction would be found almost a specific against swarming. Neither ekes nor supers piled up on high are so successful in preventing swarming, because in both cases the heat rises, while the remoteness from the entrance of the upper regions, some 2 feet distant, makes it a very laborious and inconvenient matter for the bees to ventilate properly, not to speak of the trouble of climbing so high. I am not alluding to "collateral boxes" as they were called, such as were used and recommended by the late Mr. Nutt. Occasionally these answered very well, more often they failed utterly. I am speaking of one large hive, say 24 or 28 inches long, 12 inches wide, and 9 or 10 inches high, with sliding divisions, capable of being removed in the spring and replaced in the autumn. Such a hive is the nearest approach to, and yet an improvement on, one of the favourite localities selected by stray swarms—namely, between the joists and flooring of rooms which have a communication with the open air. If such hives were made with bar-frames, an exact adjustment of plunder and convenient supply of food and breeding combs could be made every autumn, when the contracting slides are replaced for the winter. The entrances to these hives should be capable of contraction and enlargement according to the season, and might range from 3 to 9 or 10 inches wide. Hives of this sort are yet to be constructed, as I am not aware of their ever having been tried.

But what of ordinary hives, how can these be prevented from swarming? The next best thing is to put on each a large flat super with plenty of space for easy communication, regardless of whether the queen breeds in them or not. The ordinary plan is to have the communications as small and narrow as possible, to prevent the queen from ascending and laying eggs in the supers. We should say to those bee-keepers for whom I am now writing, Never mind the queen ascending and spoiling the symmetry of your honeycomb. Some of it may not be quite so beautiful as you would like, but if honey abounds a large proportion of the comb will be as perfect as you could wish, and as to the rest the rearing of one batch of young bees in freshly made comb is but very slightly deteriorating. Anyhow what you lose in quality you will certainly gain in quantity, in fact you will have both quantity and quality in measure.

Suppose with all your care one of your stocks should swarm. We advise you to put it into a full-sized hive and set it in the place of the stock out of which it came. If you remove the old stock to a new temporary stand for a day or two, most of the full-grown bees in it when they fly abroad will return to the old stand and strengthen the swarm, which ought to become heavy, supposing it to be an early one. As for the old stock, now greatly weakened in population, it may be usefully employed in preventing the swarming of one of your other stocks, if you have any, instead of being treated in the usual way; for you can turn it up and after fumigating the bees with a little brown paper or fustian smoke, cut out every royal cell that you can see. This done we recommend you to place the stock as a super over one of your other stocks. It will be taken possession of immediately by the bees below, who will hatch out carefully all the young brood in the cells, and proceed to store honey in them after a thorough cleaning. If the combs should be older and blacker than those of the stock to which you propose to join them, we advise rather the reverse treatment. Place the swarmed and empty hive under the stock instead of over. By this means what honey you get will be stored in the fresher combs of the younger stock, and will be proportionately purer. This plan is largely adopted in America, and helps them to those enormous harvests of honey of which we read. Of course the honey will not be of first-rate quality, but by a judicious method of treatment by separating the cleaner and fresher combs from the rest and extracting the honey separately, a very profitable harvest will be obtained, some of it being very excellent honey.

Where common straw hives are used they can be almost indefinitely enlarged by the addition of supers or ekes. The eke is the surest preventive of swarming, but we would elevate the hive on a box of stout wood with several long parallel slits in the top—say a foot long and an inch wide. The depth and size of the box must be regulated by the season and the pasturage of the locality. Also the entrance must be large, and only at the lower part of the box. That in the old hive must be stopped up. —B. & W.

NEW BOOK.

A Manual of Bee-keeping. By J. Hunter, Honorary Secretary of the British Bee-keepers' Association. London: R. Hardwick.

Recently we had occasion to refer to all the English works that have been published on bee-keeping, and we found them amounting to more than fifty. First was "Profitable Instructions for the Perfect Ordering of Bees," and that was published almost three hundred years ago, for 1579 is the date on its title-page. Then we had before us Butler's "Feminine Monarchie," published in 1634, when Charles I. ruled the land, and which we notice only to observe that six years later, when Cromwell was Protector, John Day of Caius College, Cambridge, named his book "The Parliament of Bees;" and in 1655 Samuel Hartlib, yielding still further to political expediency, designated his volume "The Reformed Parliament of Bees!" Passing over all the others, we will only observe that within years very recent we have had thoroughly practical works published on bee-keeping by such thorough apiarians as Bevan, Taylor, Woodbury, and Pettigrew—all good and all cheap; therefore we advise Mr. Hunter in the next edition of his book to erase from its preface this sentence, "I was acquainted with no work embracing the requisites of cheapness and completeness up to our present standard of knowledge." That Mr. Hunter's volume will soon reach to another edition we have no doubt, for it is a careful condensation well arranged of all the knowledge requisite for successful bee-keeping. He does not confine himself to the results of his own practice and observations, but candidly acknowledges that he has gathered—but always naming his authorities—whatever he knew would help the novice "on the road to profitable bee-keeping in a merciful and rational manner."

Every arrangement, every need, every operation is separately considered in thirty-six sections. We will enable our readers to judge for themselves by quoting one, because it is the shortest.

"Robbing.—'Honesty is the best policy,' but bees seem to think the contrary, and 'might gives right' is a proverb more often acted upon by them. Should a hive become weak, and especially if queenless, as soon as the state of affairs be discovered by a neighbouring strong family, a raid is organised. Poor bees! gallantly do they defend their stores, and great the slaughter that ensues but numerical strength is sure to conquer. When the assailed are fully assured that resistance is in vain, they act very wisely, and instead of fighting longer, turn to and help the invaders to carry off the stores, and in reward are re-

ceived as new citizens in the freebooting hive. If a hive which is known to be weak be discovered in a state of unusual bustle and excitement, watch it narrowly; and if fighting be going on nearly close up the entrance for a few days, leaving room only for one or two bees to pass at a time; a narrow door is more easily defended than a wide open gate. Should the assailants be very pertinacious, wet a piece of tow or moss with carbolic acid, and fasteu it on the alighting board; the robbers will be too disgusted to pass, but the defenders will brave it. Fighting may often be ascribed to the bee-keeper's carelessness in spilling honey or syrup round about a weak stock, which being discovered and appropriated by stronger bees, they soon seek for more plunder in the same locality. The Rev. Mr. Kleine says robbers may be repelled by imparting to the hive some intensely powerful and unaccustomed odour. He effects this by placing in it in the evening a small portion of musk, and on the following morning the bees, if they have a healthy queen, will boldly meet their assailants. These are nonplussed by the unwonted odour; and if any of them enter the hive and carry off some of the coveted booty, on their return home, having a strange smell, they will be killed by their own household."

The volume is illustrated by many well-executed woodcuts.

OUR LETTER BOX.

Eggs (*C. A. G.*).—The notes you refer to did not mention any names, and we think it would not be advisable to publish an index to them. Moreover, it would lead to pleas and rejoinders for which we could not afford space.

Detecting Sex of Eggs (*J. T. G.*).—The knowledge you crave has been sought for many years. Many have been convinced they had acquired it till they put it to the test. The theory was that the pointed eggs produce cocks, and the round eggs pullets. We do not believe in it. We have tried for years, and the only result we can arrive at is that we believe the early-laid eggs of a sitting produce more cocks than the later ones; even this, we believe, is uncertain, but it has proved right with us sometimes.

Unusual Length of Hatching-time (*R.*).—We cannot explain why it is, but in hatching largely we have frequently twenty-four hours between the first and last chickens coming out. Such being the case, there is no reason why the time may not be somewhat extended. We are careful to remove the shells, and leave the chickens till all are out. If we were to put Spanish, Cochins, and Brahmas together, we should expect the Spanish out first from the thin shells.

Chickens Dead in the Egg (*L. G. L.*).—In all cases sitting eggs should be thoroughly damped for some days before they hatch. When this is not done, especially when the wind is in the east, the egg becomes unnaturally dry, and the inner membrane so tough that the chicken cannot make its exit. Its little strength is wasted in vain endeavours to break out. If the eggs were wetted daily for ten days before hatching time this could not happen. It may be done when the hen is off. The hands should be dipped in cold water, and then wrung several times over the eggs. It is merely following Nature. All birds leave their nests at daybreak in search of food. The grass then is wet with dew, often with white frost, sometimes from rain. The hens return to their eggs reeking with wet. They always hatch, and so will yours probably if you use like precaution.

Detecting Fertilised Eggs (*S. E.*).—We cannot help you, the fertility of an egg can be only discerned after a change has taken place, and life begins to be developed. It can be seen after the egg has been five or six days under the hen. Choose a dark outhouse on a sunny day, close the door all but a streak of light, make a telescope of the hand, place the egg at the end farthest from the eye, bring it in a direct line between the sun and the eye, and an irregular dark streak will be plainly visible, showing the change has begun. Where there is no change the egg is not impregnated.

Cooking Eggs Soft.—I learnt the following mode at Queen's, Oxford. Have a tin boiler with a coverlid. Boil the water and put in the egg for six minutes, and take the boiler off the fire as soon as you put in the egg. The reader will be surprised at how good the white is when so cooked. It is as good as the interior. Usually the white is as hard as a board, tasteless, and indigestible.—W. F. Radclyffe.

Canary Breeding (*C. S., Liverpool*).—Canary breeding cannot be carried on to such advantage when the space is limited, or the breeding compartments are not advantageously constructed, and especially when the first broods cannot be separated from the old hens while sitting their next nests of eggs. Where only one nest is provided it is a natural consequence that the eggs may become soiled and spoiled by the shifty young birds, who for a time prefer crowding about the old nest quarters. It is rarely young Canaries leave the nest before they are seventeen or eighteen days old, and by sending the hen again to nest (when the young are a fortnight old), in another part of the compartment away from the young, the eggs will neither be disturbed or soiled. But even if the hen lays her second lot of eggs in the nest where the young brood may be, each egg can be taken out and kept in bran or fine sand until the whole, or at least four of them are laid, when they can be replaced in a clean nest in the cage for the hen to sit upon. The young birds by this time will be on the turn of three weeks old, and if, when you return the nest with the eggs in, you find the young interfering with or annoying the old hen, at once partition or cage them off with the cock bird, who will bring them up and learn them to feed in a day or two. Our plan is when the young Canaries have attained the age of twelve days, to introduce into the breeding compartment a duplicate box or basket with the nest half made, and some nesting material for the hen to put the finishing stroke to. We take care that there be two hooks or nails in different parts of the cage for hanging the boxes on. We transfer the nest with the young on to the other nail, and in its place suspend the clean nest. Most hens like their old breeding quarters. The hens will be laying and no doubt commencing to sit before the first brood have left the nest, and will escape much of the annoyance they are subject to when only one nest is used. Most hens when nesting again, or sitting their eggs in another part from where the young birds are, will chastise their offspring if inquisitive or annoying. There is another advantage (which we look upon as a part of good management), and that is if you send the hens to nest earlier than they would otherwise go, if having to cope with a nest of fidgetty young birds, which have to leave the nest before the hen can well settle down to sitting, the probability will be that one-half the feathers will be stripped off or plucked by the hen, who will line her nest with the same. Now, what can be more annoying than to have what the "fancy" call their "plums" mutilated in this way, and the second feathers shooting forth before art can step in to assist Nature? Pepper and every other artificial mode of operation would then be of no avail.

The Seed Question (*Note*).—For the further information of Canary fanciers, we may state that we have not used one grain of canary seed for the past month. For canary seed we have substituted white millet.

Preserving Peas Green (*F. J.*).—Pick them when full grown, shell them dry them gently but thoroughly, and then store them in canvas bags in a dry place. When required for use soak them in water for a few hours until plumped-up, and then boil them. The following mode has been reported to us by a person well qualified to judge of such matters as being very successful:—Carefully shell the peas, then put them in tin canisters, not too large; put in a small piece of alum, about the size of a horsebean, to a pint of peas. When the canister is full of peas fill up the interstices with water, and solder on the lid perfectly air tight, and boil the canister for about twenty minutes; then remove them to a cool place, and they will be found in January but little inferior to fresh newly-gathered peas. Bottling is not so good—at least, we have not found it so; the air gets in, the liquid turns sour, and the peas acquire a bad taste.

Straw Super (*W. F. Clark*).—As soon as the straw hive on the top of the empty bar-frame hive is full of bees, they will commence to build combs in the bar-frame one, and may fill it with combs before they swarm; but sometimes bees so treated swarm before the nadir is filled. If you were to remove the frame hive and put a super on the top the bees might swarm then. Nadirs are more likely to prevent swarming than supers. Your better way will be to let it remain as it is for a month, or swarm it artificially when it is ready. At present it is not strong enough to occupy both top and bottom hives.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. May.	9 A.M. Barometer at 32° and Sea Level.	Hygrometer. Dry.	Hygrometer. Wet.	Direction of Wind.	Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	Shade Temperature. Min.	Radiation Temperature. In sun.	Radiation Temperature. On grass	Rain.
	Inches.	deg	deg.		deg.	deg	deg.	deg.	deg.	In.
We. 12	30.361	60.5	52 6	N.W.	54.6	73.1	45.1	120.4	41.2	—
Th. 13	30 316	66.0	59.0	N.W.	56.1	77.2	48 6	131 8	44 4	—
Fri. 14	30 283	65.3	57.8	N.W.	58.2	78.3	52 0	123.1	47.2	—
Sat. 15	30 165	69 9	61 9	W.N.W	59 4	82 0	54 0	12 .0	49.5	—
Sun.16	30.230	64.7	54 9	S.	60 0	73.0	51.0	120.9	49 2	0.010
Mo. 17	30 084	57 2	50 9	S.E.	59 4	65.7	40.4	118.0	36 8	0 010
Tu. 18	29 590	61 5	55.5	W.	58.6	67.6	46 5	112.0	43.2	0.015
Means	30.147	63.6	56.1		58.0	74.0	48.2	120.1	44 5	0,035

REMARKS.

12th.—A very fine pleasant enjoyable day. [pleasant.

13th.—Rather hazy morning; a very fine day, but rather too warm to be

14th.—Very fine day; rather stormy-looking about 7 P.M., but clear by 9.

15th.—A very beautiful day, very warm in the middle of the day; but rather cloudy in the evening, though soon clearing off.

16th.—Fine morning; and all day fair and pleasant; the evening very much cooler, in fact quite cool. [7 and 8 P.M., but fine after.

17th.—A very bright pleasant day, with cool breeze; rather cloudy between

18th.—Slightly cloudy day; a little rain just after noon, and again about 7 P.M., in each case preceded and accompanied by violent gusts of wind.

A week of pleasant weather, bright and dry, and though the mean temperature is about 7° above that of last week, only one day on which it was too warm to be agreeable.—G. J. Symons.

COVENT GARDEN MARKET.—May 19.

The supply is well kept up; business, however, somewhat interrupted by the holidays. The French goods have not come so well during the last few days owing to the unusual heat of the weather.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples	½ sieve	2 6 to 3 6	Mulberries	lb.	0 0 to 0 0
Apricots	box	4 0 6 0	Nectarines	dozen	15 0 30 0
Cherries	do.	4 0 7 0	Oranges	℔ 100	6 0 14 0
Chestnuts	bushel	10 0 20 0	Peaches	dozen	15 0 24 0
Currants	½ sieve	0 0 0 0	Pears, kitchen	dozen	2 0 5 0
Black	do.	0 0 0 0	dessert	dozen	8 0 12 0
Figs	dozen	8 0 12 0	Pine Apples	lb.	4 0 8 0
Filberts	lb.	0 0 0 0	Plums	½ sieve	0 0 0 0
Cobs	lb.	0 0 2 0	Quinces	dozen	0 0 0 0
Gooseberries	quart	0 8 1 0	Raspberries	lb.	0 0 0 0
Grapes, hothouse	lb.	6 0 12 0	Strawberries	lb.	6 0 16 0
Lemons	℔ 100	8 0 12 0	Walnuts	bushel	8 0 12 0
Melons	each	6 0 10 0	ditto	℔ 100	1 0 1 0

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes	dozen	8 0 to 6 0	Leeks	bunch	0 4 to 0 0
Asparagus	℔ 100	3 0 5 0	Lettuce	dozen	1 0 2 0
French	bundle	2 0 10 0	Mushrooms	pottle	0 9 2 0
Beans, Kidney	℔ 100	2 0 0 0	Mustard & Cress	punnet	0 2 0 0
Broad	bushel	0 0 0 0	Onions	bushel	4 0 8 0
Beet, Red	dozen	1 0 3 0	pickling	quart	0 3 0 0
Broccoli	bundle	0 9 1 6	Parsley	doz. bunches	4 0 6 0
Brussels Sprouts	½ sieve	0 0 0 0	Parsnips	dozen	0 9 1 0
Cabbage	dozen	2 0 0 0	Peas	quart	2 0 4 0
Carrots	bunch	0 3 0 3	Potatoes	bushel	2 3 6 0
Capsicums	℔ 100	0 0 0 0	Kidney	do.	3 0 5 0
Cauliflower	dozen	4 0 8 0	Radishes	doz. bunches	1 0 1 6
Celery	bundle	1 6 2 0	Rhubarb	bundle	0 4 0 9
Coleworts	doz. bunches	3 0 4 0	Salsafy	bundle	1 5 0 0
Cucumbers	each	0 6 1 6	Scorzonera	bundle	1 0 0 0
pickling	dozen	0 0 0 0	Seakale	basket	1 0 1 6
Endive	dozen	2 0 0 0	Shallots	lb.	0 3 0 4
Fennel	bunch	0 3 0 0	Spinach	bushel	3 0 4 0
Garlic	lb.	0 6 0 0	Tomatoes	dozen	6 0 0 0
Herbs	bunch	0 3 0 0	Turnips	bunch	0 3 0 0
Horseradish	bundle	0 0 4 0	Vegetable Marrows	doz.	0 0 0 0

WEEKLY CALENDAR.

Day of Month	Day of Week.	MAY 27—JUNE 2, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m. h.	Sun Sets. m. h.	Moon Rises. m. h.	Moon Sets. m. h.	Moon's Age.	Clock after Sun. m. s.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
27	Th	Royal Society at 8.30 P.M.	66.5	44.7	55.6	55 af 3	59 af 7	4 af 1	6 10	22	3 9	147
28	F	Royal Institution at 8 P.M.	68.1	44.4	56.2	54 3	0 8	19 1	27 11	☾	3 2	148
29	S	Crystal Palace Summer Exhibition.	67.5	44.1	55.8	53 3	1 8	32 1	after.	24	2 55	149
30	Sun	1 Sunday after Trinity.	68.4	44.7	56.6	52 3	2 8	44 1	12 2	25	2 47	150
31	M	Manchester Horticultural Society—Exhibition of	69.4	44.8	57.1	51 3	3 8	56 1	39 3	26	2 39	151
1	Tu	[Rhododendrons to June 26th.	68.4	45.9	57.2	50 3	5 8	10 2	11 5	27	2 30	152
2	W	Royal Horticultural Society—Summer Exhibition.	68.9	45.1	57.0	50 3	6 8	29 2	46 6	28	2 21	153

From observations taken near London during forty-three years, the average day temperature of the week is 68.1°; and its night temperature 44.8°.

AURICULAS: SHOWING AND GROWING.

HAVE perused with much pleasure the notices of Auricula shows, and also the remarks on exhibiting them in the recent numbers of the *Journal of Horticulture*. It was very pleasing to read of the success of the National at Manchester. However, there are, perhaps, some things in connection with the Show and the manner of exhibiting the plants that might be criticised with advantage.

First as to the remarks of "An Old Fancier" at page 364. He thinks it either wrong or in bad taste to place sticks to the trusses to hold them in an upright position; but it is very plain that if the Auricula is to receive the support of the general public the groups of plants must be effective. Now, I was not at Manchester, but was told that the effect of the Exhibition was spoiled, not so much by the dark room, but owing to the trusses falling about in all directions for the want of supports, and that the visitors might be seen to take hold of a prize-truss and hold its head up to see what the pips were like. If the stem is of the strongest description ten to one but it will grow naturally in a slanting position from one side, while the truss on the next plant may shoot off at an angle of 45° in another direction; whereas a neat stick that is scarcely seen would support all the trusses in one position.

Another objection to showing the trusses without supports is the time required to unstick the plants just before the show, and to place them to the trusses again at night. This may only seem a small matter to a grower who can bring his stock of plants in a basket on his head. I exhibited about six dozen plants at the Royal Botanic Gardens; to reach there we had to be up at 3.15 A.M., and travel behind a slow horse over a dozen miles, arriving at the gardens at little after eight o'clock; then all the trusses had to be arranged, and the pots placed where the plants were seen to the best advantage, and all to be done in a crowd of people whose only object seems to be to block the limited pathway. There is quite enough to do without untying the trusses. I have tried both ways, and I find there is a great difference between doing the work and criticising that of others. I do hope the clause suggested by "An Old Fancier" will not be put into the schedule of the Metropolitan Floral Society.

The suggestion made by Mr. Tymons about increasing the minimum number of pips from three to five I consider a good one. An Auricula with a truss containing less than five pips ought not to be taken to a flower show. Five is the minimum of the Metropolitan Floral Society. I was informed that the truss of Catherina (Summerscales) that gained the premium prize at Manchester had been cut away to three pips, each of them about the size of a silver threepenny coin or a shirt-button. The second best was about the same; while trusses of Glory (Taylor), Smiling Beauty (Heap), Omega (Turner), and True Briton (Hepworth), were left far behind. Now this is all very well in the rigid, and maybe correct, judgment of the old growers, but if this fine old flower is to become popular these old rules must be somewhat relaxed.

Then on the point of ground or body colour, why should black be preferred and all the other beautiful shades be designated "chancy?" Any other ground colour would have no chance to gain a prize in Lancashire judgment, unless a special class were to be provided for such flowers as Colonel Champneys (Turner), Marie and Sophia (Chapman), &c. Even Champion (Page) would be faulty in the eyes of a Lancashire grower.

Just a word or two on culture. Now is the best time to repot. This must be carefully done, and the plants must be kept free from green fly either by brushing it off or by fumigating with tobacco smoke. The plants must also receive plenty of air; the lights ought to be removed night and day at present. "D., *Deal*," on page 347, has said I brought my plants on by placing them in the greenhouse. Only a very few plants were forwarded in this way. The warm night temperature draws the trusses and bleaches the tubes. The Auricula will not bear forcing.

Mr. Peter Campbell of Graham's Road, Falkirk, N.B., sent me a box of blooms over which "D., *Deal*," Mr. Ball of Slough, Mr. James of Isleworth, and myself sat in judgment. Amongst them were a yellow self with green foliage, and a crimson self with green foliage. Three varieties were thought of the highest merit—viz., a blue-black self bearing some resemblance to Mrs. Smith (Smith), but much superior in form, substance, and paste; a white-edge flower had a very refined edge, the white being very pure; and a green-edged flower, the edge very pure olive green, superior to Admiral Napier by the same raiser. The paste of the Admiral is angular, the new sort has circular paste.—J. Douglas.

FRAGRANT ROSES.

It is a matter of some importance to all true lovers of the Rose that raisers should not lose sight of a great desideratum in Roses, and that is fragrance.

I am afraid, however, that this is the last qualification that Rose-fanciers consider, and if the raisers produce a Rose of first-rate form, good, distinct, and pure colour, strong growth and erect habit, they consider that they have deserved very well of their country, and that if the said Rose is quite destitute of fragrance the matter is of no consequence.

To a certain extent they judge rightly; for judges at exhibitions rarely, if ever, take the fragrance of the stand into account. I fancy I see the countenance of any of our leading judges (I do not like to mention names) if asked in the case of a disputed and difficult point of judging, to give the preference to the stand containing the most fragrant Roses! Yet, other qualities being equal, it would not be a bad way of deciding a vexed question.

I remember the Royal Horticultural Society once gave prizes to Roses to be judged by their perfume, and I have

still a catalogue in my possession where on the outer sheet the proprietor proudly informs the public that at this show he gained the first prize for "six Roses for smell;" but, alas! among other changes, notably that of refusing to pay the prize money, this is included, and the classes for perfume are withdrawn; so that there is now no encouragement to growers to cultivate Roses celebrated for their fragrance.

I remember once, at Hereford, the Marquis of Bute gave a £5 prize for twelve best York-and-Lancaster Roses, but the competition was so small that the committee persuaded him to transfer his prize to table decorations. So fragrant Roses are left out in the cold, and we live in hopes that some of the larger societies or wealthy amateurs will offer a prize for this class at one of the great exhibitions.

Now as to fragrant Roses. Here, again, by far the most superior is the Tea Rose, and if I am asked to name the most fragrant Rose I should say Devoniensis, and next place my own particular pets—Catherine Mermet and Madame Bravy, or Alba Rosea or Madame Sertot, as she is variously called Souvenir d'Elise, the most lovely of all Teas, has a most distinct and peculiar bouquet; it is really like fresh tea, and though not so pleasant as the first-named, yet is equally fragrant.

Maréchal Niel and Triomphe de Rennes possess great fragrance, while Madame Willermoz reminds one of most delicious fruit. This Rose, though rarely shown in perfection, is for fragrance almost unrivalled. Cloth of Gold is also very fragrant, and Rubens and Souvenir d'un Ami delight you with their perfume as well as charm you with their form. In fact, all the above-named Teas are good in every sense, and rarely, if ever, fail to bloom early and late.

Of the Hybrid Perpetuals it is difficult to give a list, as the great majority of this class possess most exquisite perfume; but I can name a few which are remarkably good. Général Jacqueminot among the dark Roses is pre-eminent for perfume, and La France among the lights. Abel Grand, too, is a most fragrant Rose, and that charming little button-hole Rose (which does remarkably well here), Boule de Neige, has a most sweet and distinct bouquet. Beauty of Waltham, among the light crimsons, is very fragrant, and Comtesse de Chabrillant among the light pinks. Madame Furtado, that poor weak grower, whom I almost despair of ever seeing in her beauty, is most celebrated for her perfume; and Charles Lefebvre, the grandest of dark Roses, is also very sweet.

The foregoing is a most imperfect list, but if I were to name all fragrant Roses I should want far too large a portion of your space; I have, therefore, only mentioned a few which in my opinion are most fragrant, and I hope other rosarians will supplement my list, and so make this letter the opening for another election of Roses—viz., those celebrated for their perfume.—John B. M. Camm.

[Sincerely pleased are we that an advocate for the fragrance of the Rose has ventured forth. We second all that he has said, but we are sufficiently ancient to remember Roses fifty years ago, and claim to be among the few inquired for in *The Saturday Review* who remember the scent of "the old Cabbage Rose." We delight in the fragrance of the Teas, but it is quite distinct from that of the Hybrid Perpetuals, and, indeed, that of all Roses which yield the true attar perfume. We have inhaled that perfume in the Rose gardens of the East, and testify that it is identical with that of the old Cabbage and Moss Roses. Why are these so neglected? Not one mentioned by Mr. Camm is equal and similar to them in fragrance.—Eds.]

QUEEN ONION.

In some notes on the crops of last year, which were published in the Journal in December, I called attention to the Queen Onion as a valuable early kind. Further experience has afforded such additional proof of its worth as to induce me to assign it a much higher position than I have hitherto done.

It is just about this time of the year that a hitch so often occurs in the Onion supply, the stored-up crop of the previous summer is exhausted, and really good new Onions of a useful size are not always forthcoming. To meet this want some seed of Red Mammoth, Tripoli, and Queen was sown July 15th, and the seedlings transplanted into one large bed September 5th.

Bearing in mind that the object in sowing the seed was to have a supply of Onions sufficiently large for kitchen purposes by, say, the first week in May, the condition of each kind at that time affords the best test of its merits; for however gigantic may be the proportions of Red Mammoth later in the season, if it is not larger than all other sorts when it is most wanted it is comparatively worthless. This was the condition of the two kinds at the time specified.

The Queen, sturdy yet with very slender stems, and fine bulbs 7 inches in circumference. Red Mammoth, very strong, coarse, and "bull-necked," with hardly any appearance of bulbing, the lower or thickest part having a circumference of about 4 inches. In future, therefore, preference will be given to the Queen, sowing the seed in the second week of July in the south, and a week earlier in the north, to obtain a full supply and prompt succession to the exhausted summer crop in spring.—Edward Luckhurst.

ROYAL HORTICULTURAL SOCIETY.

May 25th.

A special General Meeting of the Royal Horticultural Society was held last Tuesday in the Council-room, South Kensington, for the purpose of receiving a communication from the Council respecting the future prospects and condition of the Society, and to receive an answer to proposals made by the Council to Her Majesty's Commissioners. The chair was taken by the President of the Society, Viscount Bury. Amongst the members of Council present were Dr. Kellock, Sir Coutts Lindsay, Bart., Mr. Henry Webb, Mr. Little, Mr. Dobree (Treasurer), and the Hon. and Rev. J. T. Boscawen. Amongst the general body of the Fellows were Mr. W. Bull, Mr. G. F. Wilson, Mr. W. A. Lindsay (late Secretary to the Council), Mr. H. S. Godson, Dr. Masters, Mr. Shirley Hibberd, Mr. John Fraser, Dr. Denny, Dr. Pinches, Mr. W. E. Rendall, Mr. W. Pownall, Mr. Haughton, Sir Alfred Slade, Bart., Sir Alexander Gordon, Bart., Mr. Guedalla, Mr. Andrew Murray, &c. Several ladies were present.

Mr. Devonport, the Assistant Secretary, having read the advertisement convening the Meeting,

The Chairman rose and said that the first announcement he had to make was that of the resignation of their late Honorary Secretary (Mr. W. A. Lindsay). That resignation he had to submit to the meeting. In his resignation, Mr. Lindsay, while stating that he had taken considerable interest in the affairs of the Society, and took such steps as he thought likely to promote those interests, felt with deep regret that he could not agree with the policy of the Council or with the views of the President. Under these circumstances Mr. Lindsay thought it best for all parties to tender his resignation. It was for him (the Chairman) to ask the meeting for its confirmation of that resignation.

The Meeting confirmed it.

The Chairman again rose and said:—Ladies and Gentlemen, I now have to explain the position in which we at this moment are. My task, I regret to say, is an extremely easy one; it will be discharged in but a very few words. The result of it—the upshot, is to tell you that the Council, and we regret it, find it necessary to adjourn this Meeting for ten days. On the last occasion, ladies and gentlemen, you confided to us a certain trust, which was to make arrangements with Her Majesty's Commissioners for the future carrying on of the Society, and to submit to the Fellows a scheme for the future guidance and government of the Society. We hoped to have been prepared with such a scheme, but I regret to say time has been against us. The adjourned meeting to which I have referred was held on March the 9th, and it was not until the 16th of April we were able to obtain our first meeting with Her Majesty's Commissioners. That meeting, as I have said, was obtained on the 16th of April. Propositions were submitted by us which we had hoped would be acceptable to Her Majesty's Commissioners. Well, ladies and gentlemen, these propositions were not considered satisfactory. Then we amended our propositions on that, and, indeed, upon a subsequent occasion. At last we felt it was our duty to submit to you the circumstances under which we find ourselves placed, and I may say we were under the impression that a definite "yea" or "nay" would have been received from Her Majesty's Commissioners, and that we should have been able either to assure you we had entered into an agreement with Her Majesty's Commissioners, or that we had failed to do so. If the latter were the case, and we had failed to enter into and complete an arrangement with Her Majesty's Commissioners, we should have felt it our duty to say to you that under the circumstances it was due to our own honour—to ourselves, to resign into the hands of the Fellows the trust they had committed to us, and to beg of you to appoint in our stead those who perhaps might be more fortunate in dealing with Her Majesty's Commissioners [hear, hear]. Under those circumstances we summoned the present Meeting, believing, as we did, that before that Meeting was held a definite reply would have been received from Her Majesty's Commissioners to the last proposal—the last of six—which we have made. I do not now enter into the question of the refusal of Her Majesty's

Commissioners to entertain our proposals. That is a question I do not think it is now opportune to enter upon, because it will come up for discussion hereafter. I merely state the fact without prejudice to either party, and state it imputing blame to none [hear, hear]. We thought we would be in a position to give you definite information as to the future maintenance and conduct of the Society at this time, and under that impression we called this Meeting together. In the meantime we have received what we consider the definite answer of the Commissioners ——.

A Fellow.—When?

The Chairman.—About seven or eight days ago, but soon afterwards in that outside intimate conversation in which business is more often done than in more formal meetings, we understood Her Majesty's Commissioners did not fully comprehend the meaning of a part of our last proposal, and that it was not at all probable they might come to any decision. Gen. Scott was good enough to attend the last Meeting of our Council, about a week ago, and we then found the opinion of Her Majesty's Commissioners as to our last proposal was such as that a little longer time would bring us face to face with Her Majesty's Commissioners. I offer no opinion upon this, but, for my own part, I should feel more pleased if my honourable friends at the Council board and myself could say we had done all we could and that we resigned our trust into your hands [hear, hear]. But, the circumstances of the case being as they are, Her Majesty's Commissioners having before them the explanations we thought it our duty to lay before them, and not having received an answer to our communication, all we can ask of you is to adjourn this Meeting. We feel that ten days hence will be ample time for us to receive a definite reply from Her Majesty's Commissioners. I must point out, in justice to Her Majesty's Commissioners that during the Whitsuntide holidays "one man was gone to his farm and another to his merchandise," and so it was not altogether possible for them to assemble together. However, as far as that goes Her Majesty's Commissioners were not to blame [hear, hear]. At the same time I cannot help saying it is very unfortunate for the Society that we should be hung up in suspense [hear, hear], and I speak for myself and for my colleagues on the Council when I say that, should we be so unfortunate as not to be able to announce to you that a definite arrangement with Her Majesty's Commissioners has been made, we feel it our duty to place ourselves unreservedly in your hands, and ask you to take such action as may seem to you good in the matter [applause]. I really think I have little further to add except this, that if on the present occasion you will take my advice, given perhaps for the last time—and I assure you it is given after due deliberation and consultation with my colleagues—you will refrain from discussion on the position of the Society at this moment [hear, hear]. It could not further the objects we have in view to raise discussions which probably it would be difficult to answer at this moment, and I therefore invite you to pass, if you will permit me to say it, *sub silentio* the motion with which I shall conclude—that the Meeting be adjourned for ten days. There is one other word which I ought to say, and that is, our financial position has been greatly exaggerated. When we took office our debts—and I will not now enter particularly into figures—were very much larger than they are now. The amount of our debts has been steadily diminished under our exertions [hear, hear]; but I regret to tell you that very unpleasant action has been taken against our Society by persons from whom I think our Society ought to have looked for better treatment. Everyone here is aware that our funds have been falling off during the last two or three years, and everyone is equally aware we have been obliged to postpone the payment of the prizes granted in former years; of course I mean, as you can well understand, in last year. Well, certain gentlemen having made arrangements with their gardeners that part of the wages of those men should be whatever prizes they could make out of the pocket of the Royal Horticultural Society, and then, gardeners not having received these prizes, actions to recover them have been brought in the names of the gardeners, but in reality on behalf of gentlemen who ought, I think, show greater consideration for our Society [applause]. We have now been placed in the position either of having to pay these prizes or to be cited in the County Court for them. We choose the latter alternative for this reason—that although we have funds in our hands, and more than sufficient, to pay those prizes, yet our entire debts at this moment are rather larger than the funds at our present disposal. We think, therefore, to pay the gardeners under their threats of action before us would be, under the circumstances I have described, an objectionable form of preferential payment [cries of "hear"]. We, the Council, thought we ought not to pay at all under these circumstances—under threats, unless we could pay twenty shillings in the pound to all, which we can nearly do. But we thought it would be very unfair to our tradesmen if, because those gentlemen (for whom I have very little compassion) choose to press us in an indecent manner, we did not reserve the rights of those who have treated us with consideration. Our tradesmen have not pressed us, as they know very well we shall have ample funds from which everyone shall have his due. At the worst we do not owe half a year's income. Can anyone, or can most people say they are not half a year in advance of their income? [laughter]. I know a great many people who consider themselves extremely fortunate when they are no worse off than that [hear, and a laugh]. I merely mention this circumstance here because, between this and the time of our adjourned Meeting you may see chronicled proceedings in the County Court which may go against us, and in that case in order to carry out our principle we shall have to file a declaration of insolvency to protect our other creditors [oh! and no]. I hope, however, we shall in a short time be able to make such a statement of arrangement between the Commissioners, the Council, and our own Fellows outside as will place us in ample funds. But, ladies and gentlemen, it is well it should be borne in mind that of all those liabilities we are the inheritors, not the causers or the authors [hear]. Take my own case. It was not until after the vote which displaced the last Council that I became a member of the Society. After that vote I was asked to become a Fellow of the Society, and to do the best I could to place the Society in a better position than that in which it then stood. I acceded to that call, but I did not consider I should be made responsible for the state of things which then existed [hear, hear]. In common with other members of the Society I regretted that such a state of affairs should exist, but we did not consider ourselves responsible for it. I am prepared, and my friends of the Council around me are prepared, to enter fully and minutely into the circumstances of this Society. We are prepared to submit to you a scheme which we believe will land this Society in a prosperous position among the great societies of the country; but under the present circumstances you see my lips are sealed, and the lips of my colleagues are also sealed. I hope you will take our advice and not further discuss the position of this Society. We regret that many of you should have been brought from a distance to attend this Meeting, in order to aid, if you could, to get the Society through its difficulties. We are not responsible for this, and we hope you will be satisfied with our explanation [hear, hear].

Mr. H. S. Godson.—Have you any guarantee that Her Majesty's Commissioners will entertain your proposals between this and the expiration of ten days?

The Chairman.—None whatever.

Mr. A. Lindsay said he was of opinion that if the meeting consented to adjourn for ten days, it would be consistent with the duty the Council owed to the Society to state to the meeting what the nature of the proposals is which Her Majesty's Commissioners had under consideration [hear, hear]. The schemes brought before the Commissioners when he had a knowledge of these matters were such as neither that meeting nor any other meeting of the Fellows would entertain, and if the Council of the Royal Horticultural Society was in a position to say Her Majesty's Commissioners had accepted them, it would be for that meeting to negative them, which he had no doubt they would do. It was very important that this meeting, which was now asked to adjourn, should know exactly what the nature of the proposals before Her Majesty's Commissioners were [hear, hear]. More than that, it was highly important for the meeting, having the knowledge of the nature of the proposals, should be able to say whether they were such as they could or could not accept. So much for that part of the address of the Chairman, and he should, in the interests of the Society, ask the Fellows to weigh the matter carefully before they gave their vote upon it. With regard to a statement of the Chairman, he desired to say that as far as his knowledge went, it was not accurate to say that the debts of the Society were smaller than they had been when the present Council came into office. He (Mr. Lindsay) believed the debts of the Society were larger than they had been [cries of "no"]. Well, the debts were smaller in one sense, but if they were it was because the assets of the Society had been applied by the Council to the payments of the Society's debts [hear and "no"]. There was another point in his lordship's speech to which he should allude; it was that with respect to the prizes. As regarded those gentlemen who obtained the prizes, he felt bound to say that those of them to whom his lordship in the chair referred had very strong reasons to resent the way in which they had been reflected upon [hear and "no"]. He (Mr. Lindsay) never knew a gentleman who made the prizes his gardener obtained a portion of his wages; but there were a great many gentlemen who said to their gardeners, "If you choose to exhibit those things at your own cost, you may exhibit that which has been grown at my own cost and expenditure." Now acts of that description were very kind, and he did not think it right to say that gentlemen who acted in this way were acting in an ungentlemanly manner [hear, hear]. These very gardeners who had been spoken of by his lordship were out of pocket according to the extent to which they exhibited, and the result of the present position of affairs with respect to the Society was that the gardeners who had exhibited not only did not receive the bonus to which as prizewinners they were entitled, but, in

addition, were out of pocket money, which was their own *bonâ fide* property [hear, hear]. Under these circumstances he did not think it justifiable to say the actions in the County Court were being taken in reality by the gentlemen and only ostensibly by the gardeners. He sincerely hoped, however, they would succeed in their actions ["oh!" and hear]. The real reason why the funds of the Society had fallen off was by the neglect of provincial shows; but that, however, was not the fault of the Council, but of the general public. The Council might have held a show, and a good show, in the north this year. In conclusion, Mr. Lindsay said he was of opinion that the Chairman ought to state the grounds upon which an adjournment of the present Meeting was asked for.

Dr. KELLOCK observed that as regarded the gardeners and the loss of their prize money, Mr. Lindsay really knew nothing at all about the matter [laughter]. As to holding a meeting in the north, it was perfectly impossible to do so. There was no prize money to be got up there, and it would have cost the Society £2000 in money prizes to go to Wigan.

Mr. LINDSAY.—Have you any authority for that?

Dr. KELLOCK.—Oh yes, I have; you were on the Council at the time [laughter].

Mr. LINDSAY.—What is your authority?

Dr. KELLOCK.—It was Wigan, and it is unfair for any person to make such intemperate remarks. You only retired a few weeks ago from the Council, and if you had either good manners or good taste you would not to-day have spoken as you have ["oh, oh," and cheers].

Sir ALFRED SLADE said that no doubt anyone would have thought that the late Secretary of the Council would or could have spoken with some authority. With respect to that he (Sir Alfred Slade) had exactly the same sources of information that Mr. Lindsay had, and therefore, in the first place, he altogether objected to the principle laid down by Mr. Lindsay that the proposals of the Commissioners should either be disclosed to or discussed by that meeting [cheers]. He had understood that it was the expressed wish of the Annual General Meeting and of the adjourned Meeting of Fellows of the Royal Horticultural Society that all these negotiations between the Society and Her Majesty's Commissioners should be entrusted to the Council of the Society [cheers]. If Mr. Lindsay were on the Council now he would be the very last man to make the speech he had just delivered [hear, hear]. Mr. Lindsay said it was untrue the debts of the Society were less than what they were when he first sat at that board, but in the report presented that fact was stated, and that report was drafted by Mr. Lindsay himself [cheers and laughter]; so that when on the Council he was one who assured the Fellows that he laboured constantly to reduce the debts of the Society. He (Sir Alfred Slade) could assure the Meeting that he had as much confidence in the present Council —now that he sat amongst the Fellows—as he had when he sat at the Council Board [cheers].

Sir ALEXANDER GORDON said there was one observation he wished to make, and it was this, that it would be most unfair were they to declare their approval of any proposals or arrangement in that Meeting without consulting the five thousand Fellows of the Society. Verbal communications had been stated to be sufficient for adjourning the Meeting, but he took verbal communications to be most unsatisfactory and dangerous to act upon [hear, hear]. He should like to know whether the proposals made to Her Majesty's Commissioners were in writing, and whether they were to be taken into consideration at a future time?

Mr. GUEDALLA hoped the Council would withdraw the plea of insolvency [hear, hear], and pay the claims put forward in the County Court. It must be repugnant to every gentleman present—especially when it was considered their Society was a "Royal" one—to have a plea of insolvency entered on their behalf [hear, hear]. Why, he asked, should the Council file a plea of insolvency or a declaration of insolvency, as the Chairman told them would be the case? Let the Council pay every claim to the last farthing, and they would be supported by the Fellows.

The CHAIRMAN.—Let me call you to order for one moment. I did not say we were going to file a declaration of insolvency, but I said that if the cases went on we should rather do so than pay what we consider preferential claims.

Mr. GUEDALLA.—Well, you should pay what is due to the prizeholders [hear, hear]. Why should you be obliged to pay by compulsion? Pay away as far as you can, and when you have paid all you have got fall back upon us. I am sure it must be repugnant to every member of the Society to do such a thing as that proposed by the Chairman.

The CHAIRMAN.—I do hope the subject will not be pressed further. We are ready with our schemes. There are two of them in my hand, and I could read them to you and tell you everything that has taken place between ourselves and Her Majesty's Commissioners. We are perfectly ready to do all that, but we say it is not for the benefit of the Society that we should do so. Addressing to the Meeting questions like that which Sir Alexander Gordon put will simply place the Society in the very position we deprecate.

Sir ALEXANDER GORDON.—Well, I will only put this question, Whether the fact of asking if the proposals made by the Council of this Society to Her Majesty's Commissioners are in writing can place this Society in an embarrassing position?

The CHAIRMAN.—The whole correspondence with Her Majesty's Commissioners is in writing, and the only reason we do not bring that correspondence up is that we have not received an answer in writing from Her Majesty's Commissioners. We expect an answer from Her Majesty's Commissioners in ten days, and then we shall be glad to lay the whole matter before the Fellows.

Sir ALEXANDER GORDON.—And yet you may declare yourselves insolvent before the next ten days [hear, hear].

The CHAIRMAN.—We will as a matter of course defend the actions. What I said was put by way of illustration [oh!] What I did say was that it would be better to declare ourselves insolvent than to pay preferential claims [cries of "no."].

Mr. DOBREE (Treasurer) said if the Fellows really wanted to support the Society they ought to pay-up the amount of the subscriptions they owed. The amount was a considerable one ——

A FELLOW.—How much is it?

Mr. DOBREE.—£1240 is due from Fellows on this year ["oh, oh"]. Why do not these Fellows pay up their subscriptions? If they did so, they would materially assist us in carrying on the business of the Society [hear, hear]. We have done all we can do, but we cannot get on without money.

A FELLOW.—How much would put the Society in a good financial position?

Mr. DOBREE.—If we could find a sum of £5000 or £6000 dropped into our mouths we should be all right [laughter]. Supposing you suspended payment to-day, you have at your bankers about £2000. You owe for prizes £1400, and if I were to pay these rabid prizemen we should come to a dead stand. I will rather cut my hand off than sign a cheque to pay these prizes ["oh, oh"]. By paying them you give an undue preference to those men who won prizes at their masters' expense, because those very men who win the prizes win them at the cost of their masters' fuel, hothouses, &c. [no, and hear]. The thing is ridiculous. I have here one of the most ungentlemanly letters I ever read from a man named Wilkins about his gardener.

A FELLOW.—Read it.

Mr. DOBREE.—No, we will not read it [hear, hear]. Then to go on as to our financial position. We owe sundry accounts up to the 31st of December, and some up to the 25th of March, amounting to £1218 14*s.* 7*d.* We owe our Accountant fifty-two guineas, and we owe a Member of our Council, who put his hand in his pocket to pay for the die of the Lindley medal, between £60 and £70. That brings up our liabilities to a sum of £2703. Then we have current accounts amounting to say £200 or £300, making you owe, supposing we stopped to-day, rather more than £3000. Against that you have in your banker's hands £2000, and that we intend to protect; and if judgment is given against us in these County Court cases, the best thing we can do is to file a declaration of insolvency, and bring matters to a crisis [loud cries of "no," and a voice, "we will find funds," followed by interruption]. What are we to do if these men get judgments against us? Are we to pay all or some of them? [cries of "pay, pay," and order]. Well, you may take my place as Treasurer of the Society, but I will not sign a cheque to pay these prizes [uproar].

A FELLOW.—Somebody else must [cheers].

Mr. DOBREE.—You may do it, but I will not. As the Treasurer of the Society I am bound to protect the Society, and hence I will pay no preferential claims. If you insist on my doing it, you will have to find another Treasurer ["oh, oh"].

A FELLOW.—So we easily can [interruption].

Mr. DOBREE.—You owe about £3000, and against that you have £2000 in hand. That will pay a very handsome dividend [a laugh]. Your Fellows owe £1200, and we have a claim against Her Majesty's Commissioners for rent, &c., of between £900 and £1000. Still, all that wo'n't enable you to get along towards the end of the year. You will want a large sum to enable you to get along to the end of the year.

Dr. DENNY and Mr. GODSON rose to address the chair, but the latter gave way.

Dr. DENNY said their Treasurer had stated—whether rightly or wrongly he would not say—that they should declare themselves insolvent if judgment went against them. Well, they would be insolvent if judgment went against them previous to next meeting. Now he (Dr. Denny) asked what was to become of the Society's show after the statement made that day that the prizes would not be paid? [hear, hear]. Would they have any show whatever on the 2nd of June? Would it not be better for them to close their doors? ["no," "yes," and confusion]. Let them not turn swindlers and take 7*s.* 6*d.* for admission and yet have no show. Let them keep up the Society as honourable men, and even if the Society must fall, don't let them open their doors and charge 7*s.* 6*d.* for admission and have no show

whatever. This was a point they were not at all considering upon the question of adjournment. Let them pay their prizes [hear, hear], because if this went further, and they declined to pay their prizes, they would not have a single exhibited plant in their tent on Wednesday, the 2nd of June [hear, hear]. All he could say was that it was a very serious matter to take the public in.

The Chairman.—We do not propose to take the public in. On the last occasion we did not consider the show sufficiently good to warrant us in charging the price fixed, and we altered the admission to 1s.

Dr. Denny.—Very good so far, but what is to become of the Society, my lord?

The Chairman.—Perhaps you will find the money to put it straight.

Dr. Denny.—Had we not better wind it up?

The Chairman.—I say, wait for ten days, and for God's sake wind it up then.

Mr. Denny.—You actually propose to do it before then.

Mr. Andrew Murray reminded the Meeting that the Society was not altogether insolvent, because they had a large amount of stock at Chiswick, and various matters at Kensington, which would bring in considerable sums of money. They had a large number of subscribers and Fellows, and these prizemen, if they were asked, would be only too glad to postpone pressing their claims.

Mr. H. S. Godson said that one and twenty years ago they were in a position similar to their present one, and what did they do? They did not listen to the "cuckoo cry" uttered not only by the present but by the former Council. Why did not the Council and the Fellows put their hands in their pockets? He (Mr. Godson) was ready to put down £20, and give £5 towards the prizes [hear, hear]. Let one hundred others say the same, and the whole business could be easily settled [cheers]. If the present Council or the Royal Commissioners could not give their time to the business of the Society let a Committee of Investigation be appointed the same as there was twenty years ago. At the time he referred to they paid everybody. Let them now pay as honest men. Let every man put down his name for so much. What had they been doing? They had been inducing people to come there to South Kensington to exhibit flowers and plants for the sake of getting prizes. Let them be honest at all events, even if they spent the coats off their backs [cheers and laughter]. Let a Committee of Investigation be appointed, and he should prove that Her Majesty's Commissioners owed the Fellows £9000. The question now was, Pay or not pay.

Mr. Andrew Murray seconded the motion proposed by the Chairman, that the Meeting be adjourned for ten days.

The Chairman then put the motion.

Mr. W. Bull said he sympathised very much with the Council.

The Chairman.—I have put the question of adjournment. Let it be decided, and the Meeting will hear you afterwards.

The motion was then put and carried, with a few dissentients.

Mr. W. Bull said he desired to state that he heartily sympathised with the Council, but then their great Show took place next week and the meeting had heard nothing of what was being done to carry out that Show. There would be no prizes, and he thought there ought really to be some scheme laid before them by which the prize money could be got [hear, hear]. He was surprised to find that the Council was taking no action with those who were the friends of the Society. The prize money would not amount to more than £600 or £700. Therefore, let a number of the Fellows subscribe to pay the prize money the day after the Show. It was, he thought, a most humiliating position for the Society to be placed in.

The Chairman.—Mr. Bull's proposition will be considered.

A vote of thanks was given to the Chairman, and then the Meeting stood adjourned to Friday the 4th of June.

[It was understood that Mr. W. Bull stated at the end of his speech that he should put down £100 towards the forthcoming prize-list. In the noise and confusion caused by the Meeting breaking-up as soon as Mr. Bull began to address it, it was impossible to catch what he said.]

ROYAL BOTANIC SOCIETY.

The Exhibition at Regent's Park yesterday must, both as to quality of plants and arrangement, be pronounced very superior. On entering the marquee the bold masses of Azaleas, Roses, and Pelargoniums were strikingly effective. Time only permits a hasty glance, minus the awards, which were not made when we left the tent.

In the nurserymen's class for twelve stove and greenhouse plants in flower Mr. B. S. Williams and Messrs. Jackson & Sons staged admirable collections. Mr. Morse, Epsom, also sent good plants. In the corresponding class for amateurs—ten plants—handsome groups were contributed by Mr. Ward, gardener to F. J. Wilkins, Esq; Mr. Chapman, gardener to J. Spode, Esq.; Mr. Toms, gardener to H. Wettenhall, Esq.; and Mr. Carr, gardener to J. L. Hinds, Esq. In these groups the Ixoras, Ericas, and Azaleas were very fine. For six stove and greenhouse plants equally good specimens were exhibited, Messrs. Jackson & Sons, Mr. B. S. Williams, and Mr. Morse being prominent amongst nurserymen; and Mr. Ward, Mr. Chapman, gardener to J. Spode, Esq., Hawkyard Park, and Mr. Toms being to the front in the amateurs' class. Ixoras, Aphelexes, and Clerodendrons were prominent in the collections.

The Azalea classes were a show in themselves, so admirably were the plants bloomed and exhibited. Amongst nurserymen, for twelve plants in 12-inch pots, the examples from Mr. Turner and Messrs. Ivery & Son were well-finished densely-bloomed plants. For six plants unlimited as to size of pot, immense specimens were staged by Mr. Ward, Mr. Child, Mr. Wheeler, and nice pyramids from Mr. Ratty. Amongst the nurserymen's "giants," noticeable were those of Mr. Williams, Messrs. Lane and Son, and very perfect smaller plants from Messrs. Ivery and Son.

Roses were an imposing feature of the Exhibition. In the classes for six and nine plants Messrs. Paul & Son, Cheshunt, Messrs. Lane & Son, and Mr. Turner staged splendid examples of cultural skill, while an attractive bank of decorative plants in the class for twenty in 8-inch pots was contributed by the same renowned growers, those from Cheshunt being the best. Messrs. Lane & Son sent excellent boxes of cut blooms, La France being in splendid form.

Heaths were very good. For six plants (nurserymen) Messrs. Jackson & Sons, Kingston, and Mr. Morse, Epsom, competed. In the class for twelve the same growers sent smaller but well-grown plants. In the amateurs' classes Mr. Ward and Mr. Wheeler had splendidly-bloomed globular specimens.

Orchids were exhibited by Mr. Williams, who had healthy handsome plants of Cattleyas, Vandas, and Cypripediums. Messrs. Jackson & Son and Mr. Morse also contributed highly interesting groups. Amateurs were represented by Messrs. Ward, Ritchie, and Child, who had creditable specimens. Exotic Ferns came from Mr. Wheeler, Mr. Ritchie, Mr. Carr, and Mr. Williams, and good collections of fine-foliaged plants from Mr. Legge, gardener to S. Ralli, Esq.; Mr. Carr, gardener to L. J. Hinds, Esq.; Mr. Clark, gardener to A. Shuter, Esq.; and Mr. Wheeler.

Pelargoniums were excellently exhibited by Mr. Ward, Messrs. Dobson & Son, and Mr. James, Mr. Ward's plants averaging 5 feet in diameter. Calceolarias from Messrs. Dobson & Son and Mr. James were sturdy well-bloomed plants. Mr. R. Parker, Tooting, and Mr. Ward exhibited beautiful groups of hardy herbaceous plants, and Messrs. Jackman & Son a fine collection of Clematises.

In the classes for new plants Messrs. Ivery & Son exhibited Azaleas; Mr. Bull Pelargonium Beauty of Oxton, very telling, also a bright Aucuba, Luteo picta, a quaint Pilocerus, a bright Blandfordia, &c. Messrs. Jackman & Son had two handsome Clematises, Alba magna and Mrs. Hope; Mr. George Ivy-leaved Pelargoniums; Mr. Foster and Mr. Turner superior Show and Fancy Pelargoniums, the last-named exhibitor also showing a new white dwarf Lobelia, Duchess of Edinburgh. Mr. Braid staged his Pelargonium Duchess of Edinburgh, which is exceedingly free and floriferous. Messrs. James Veitch & Sons, Mr. B. S. Williams, and Messrs. E. G. Henderson & Sons also sent valuable collections of plants of considerable interest and beauty, and Mr. Croucher staged a novel group of Agaves.

CHAPTERS on INSECTS for GARDENERS.—No. 1.

Many persons, who not only pride themselves on being well educated but who really are so, would be much perplexed if required to answer off-hand this question, What is an insect? As the story goes, at some party where the definition was asked for, and a variety of replies, none deemed satisfactory, had been given, a Scotchman with grave face announced that he would end the difficulty, and having secured general attention remarked, "Weel! an insect is just an insect, and that's all about it!" which was a cutting of the Gordian knot. And some of us will remember the cut in *Punch*, representing a gentleman standing on a railway platform in some perplexity with a tortoise in his hand and a lot of luggage about him, and an obliging porter informs him when he asks what he will have, to pay, that "rabbits and cats are dogs, but you won't have to pay anything for that, because it's an insect!" And many other creatures as far remote from insects as are tortoises are popularly reputed to belong to that class because of their mode of life.

All creeping crawling things are insects in the eyes of some people; I have even noticed the name applied to small gliding mammals, such as the field mouse. Those with a little more idea of the right mode of classifying animals may perhaps derive some light through the circumstance that insects have more legs than quadrupeds, birds, or reptiles; but if they would

answer, "An insect is a creature with six or more legs," they are checked by the recollection of various grubs and maggots that are footless. I have heard it given as a broad definition of an insect that it is an animal that can fly, walk, or run, which is obviously inapplicable to all insects in their preparatory stages, and only suiting a proportion in the perfect or imago condition. Mr. Wood alludes to a section of the community in whose minds there rests a belief that insects are only skin and squash, but even these would scarcely give this simple formula forth as a definition. Then as to size and shape—these are no standards, since some insects are larger than certain quadrupeds or birds; and as to shape, there is an infinite variety of this noticeable in the insect world. But the word just used needs only to be broken in two, and we at once have a help to the right understanding of the nature of an insect. The body is divided into parts, sections, or segments, more or less noticeable in different species and individuals, yet always existent, and furnishing a most reliable distinction, since no such formation occurs in the higher animals. I point this out as immediately connected with the familiar English name, but there are other distinctions sufficiently obvious, and easily remembered when once pointed out, to which I shall have to make reference presently.

If I were asked, "What classes of men are by their employment brought into most frequent contact with the insect races?" I should have no difficulty in answering, Horticulturists and agriculturists; a necessary consequence from the fact that the great majority of insects are to be found living upon or closely associated with vegetable growths. Yet, speaking generally, it is not amongst these that we find a large amount of knowledge with regard to insect appearances and insect habits. If there is a familiarity that breeds contempt, as a proverb assures us there is, we may discover also a familiarity that produces both dislike and ignorance, contradictory as that may appear. Yet in saying this, and speaking more particularly of horticulture, which concerns us here, my observations are applicable rather to the time that has past than to the present moment, for amongst amateurs and professional gardeners we now perceive a growing inclination to acquire insect lore. With some, possibly with most, the moving cause is the recognition of the truth that it is highly advantageous to gain at least an outline knowledge of the insects that belong to the garden, orchard, or plantation, viewed as friends, foes, or neutrals in their relation to the work of the horticulturist. Then I am also glad to record that an increasing number of entomologists is being drawn from the ranks of gardeners, some becoming much interested in the curious structures and the remarkable habits of these creatures, long unjustly deemed to be nothing better than nature's nuisances. And the day may come when such facilities for acquiring a knowledge of insects as entomological classes, or series of lectures specially suitable to gardeners and well illustrated with living or dead specimens, may be common in London and other towns.

It is interesting to become acquainted with the histories of particular insects, and in this Journal from various sources, and occasionally of late years from the pen of the present author, numerous facts have been published which it may be presumed are not without their value to gardeners. But of course the references to insects thus given from time to time cannot be supposed to help greatly towards a methodical knowledge of insects as a class of living things, though they bring out prominently individual species. I have recently observed that, however well such life-histories may be sketched, something more is wanting to bring up the gardener's knowledge of insects to the proper standpoint. A man may read, and even ponder carefully, much that is written upon insects, and yet have very hazy notions about their grouping or classification. Is this an indifferent matter? Assuredly not. Few are so ignorant as not to perceive that a beetle and a moth are decidedly unlike each other, and that a grasshopper and a blow-fly are not next-of-kin, but they may not go much farther. Whether we have as many kinds of beetles as of moths, or in what respects the grasshopper's life is different from that of the blow-fly, about these and a host of other particulars they are in the dark. Now, it could be demonstrated that an acquaintance with insects as distinguished into orders, families, genera, and species, is helpful towards mental improvement; but it is more to our purpose to assert, as we may, that to the horticulturist a knowledge of some of the broad distinctions is highly helpful. As a general rule the habits of groups show a certain identity throughout, and with an insight into the general history of any one group of insects we are the better prepared to understand a species belonging to that group. In these pages I shall suppose myself accompanied by an intelligent horticulturist who wishes to have, in a style not too scientific, an outline sketch of the insect world so far as it concerns us in these islands; and if there should be some who think I am repeating what is, or what ought to be, already known to the reader, I would remind these that it is as well to obviate possible difficulties at the outset.

Let anyone who is by no means a naturalist pick up the next frog he comes upon, and take a big caterpillar off the handiest bush. As he looks at the somewhat incongruous pair he sees differences, it is true, yet he is most likely tempted to consider that they are in much closer alliance than, say, a quadruped and a bird. But herein he is wrong, and stress must be laid on the grand distinction between vertebrates and invertebrates. In the vertebrates, running down from man to reptiles and fishes, there is always found a backbone—the spinal column. The skull may be wanting as in fishes, or the limbs and ribs as in various reptiles, but in each class of the vertebrates there is an internal skeleton on which the framework of the body is built up. An old writer, who took upon himself to unravel the mysteries of Scripture natural history, saw a fancied distinction between the "creeping things" of Genesis and flying insects. By the former term, he argued, only such insects as creep, walk, or leap could be intended. Winged insects must be placed under the category of "fowls of the air." But from the mere possession of wings nothing can be proved as to similarity, for though birds and some insects have these organs of flight, they are farther apart in reality than insects and molluscs or worms, which are totally incapable of aërial movements.

Insects, then, like all invertebrate animals, have no backbone, and of necessity it follows that there is no central brain—no organ to which the sensibilities, resident in the various parts of the body, send "telegraphic communications," if one may so speak. All the older naturalists denied insects both a nervous and a circulatory system, but therein they were probably wrong. In the latter circumstance they came to a hasty conclusion, because on dissection they could not detect any heart nor an obvious motion of fluids throughout the body. Now our best authorities support the theory that a long muscular canal extending from the head to the tail, and supplied with a series of valves, acts as a compound heart; from it are distributed numerous minute ramifications, and through these channels, as is supposed, the dorsal vessel sends through the body, and receives again, a vital fluid, which we might call blood, as it fulfils the same end. Mr. Newman, indeed, suggests that when one caterpillar bites another, as happens occasionally among the species that are inclined to be quarrelsome, the flow of this greenish substance proves an incentive to rage, which, were it true, would show an analogy to the recognised effects of a blow drawing blood in some creatures of nobler race. Then, as to nerves, "thereby hangs a tail;" connected with these there lies a much-vexed and as yet unsolved question —How far insects have the sensation of pain? I am not going to spill any ink in the controversy here, though I have been in the battle-field in days gone by. Suffice it to say that insects have a succession of nerve-centres or ganglions, which are arranged along the body and limbs, and which seem to be independent of each other. Seem! but there is the puzzle. If they were so entirely the head of an insect might want to go one way, the body in another direction, and the legs in another; but somehow all the movements are brought into harmony. Still, it is an odd fact that, as has been often proved, you may cut an insect about strangely without causing its immediate death. Then again, as to breathing, there we have the tube arrangement again. On each side of the body of an insect an air vessel or passage is situate, with several openings, called spiracles or breathing pores, communicating with the external air. The stoppage of these is death, and hence the speed with which a wasp or bee may be laid prostrate by just touching the abdomen with a feather dipped in oil.

But as to general outline: If we take for examination a fly, which is at the lower end of the class, or a beetle, which stands at the summit; though the one has two wings merely, and the other two wings and two elytra or wing-cases, they have each six legs, the almost universal number among perfect insects; and the body is divisible into the three portions, called the head, thorax, and abdomen. In all insects the head is hard, aptly described by one writer as a kind of box, formed of a single piece, and bears the antennæ in front—peculiar organs, which in different species show so much variety. They are occasion-

ally called "feelers;" but this name properly applies to smaller organs called "palpi." If we want another name for antennæ we may call them "horns." The head is also distinguished by compound or facetted eyes, which give an insect a facility of seeing in all directions without moving the head or rolling the eyes; that, in fact, is to insects an impossible performance. Other circumstances distinguishing insects must be noticed subsequently.—C.

CUCUMBERS—ROYAL HORTICULTURAL SOCIETY.

Steadily and progressively advancing is horticulture to a high standard of excellence, both in the raising of improved varieties and in cultural practice. In no department of gardening has the advance been so decided as in Cucumbers. Many excellent varieties have from time to time been raised as improvements upon existing kinds. Their originality and quality have in many, and I may say most, instances been vouched for by the granting of certificates by the Royal Horticultural Society, decided by the outward appearance of the fruit. Outward evidences of quality are, however, seldom deceptive, so that no doubt need be entertained as to certificated subjects being all they are put forward to be in quality. There are, however, other equally momentous desirabilities, especially to the cultivator—viz., constitution and free-bearing. These latter cultural qualities have been ably carried out at the Society's experimental garden with many subjects, the two combined being the best guarantee the public can have of the sterling merit of the subject certificated.

Such a Society cannot but be of the highest value alike to raisers and horticulturists generally, as well as to the public at large, for if not directly they must indirectly be interested in all improvements of quality and quantity. In these days the one is of no use without the other, and it is just this which has brought the Society into such disfavour with horticulturists. All along the line the cry ascends, What is the good of the Society to gardeners? Its subscriptions are so high as to exclude the vast majority, whilst the advantages of membership are so indefinite as to preclude those who could, and unquestionably would, join hand and head with the Society. The whole life-history of the Society, or at least of late years, has been to drive from its councils and participation in its work practical horticulturists. As representing horticulture it, so far as gardeners are concerned, has no claim, for from the time that it took upon itself to stop criticism by rejecting the "Gardeners' Magazine" of London, because it contained some "offensive" expressions, which pointed out the inutility of the papers of its then President to practical gardeners. Various efforts, feeble though they were, have from time to time been made to ameliorate the condition and bring into closer connection with the Society the workers of the horticultural hive—notably the admission of young gardeners into the Chiswick garden for a course of training preparatory to an examination with a view to a certificate, and the admission of local societies into union, and the holding of provincial meetings. Notwithstanding these advances, the tenor of the Society has been to horticulturists, and to the craft in particular, a heave only of the cold shoulder. I write not in disparagement, nor with a desire of wounding anyone's susceptibilities, but in a spirit which not unmoved by past wrongs is fully alive to the importance of the Society as a centre of horticultural encouragement, enlightenment, taste, and in furtherance of the best interests of horticulture throughout the empire, home and colonial.

It is of no use dwelling on the palmy days of Chiswick—they are gone; but there is no good in keeping even the Chiswick establishment as an experimental garden, and fritting away its resources as such as a furnishing ground for the South Kensington garden. It is simply means put to anything but a horticultural employment, for the South Kensington gardens have not any pretension to the display of either arboriculture or floriculture in their highest forms. There is no disputing their desirability as a lung to wealthy persons who have country residences, and who miss during the London season the garden sweets, and therefore wish to have a spot near at hand to which they can resort for promenade amid bright flowers, inhaling balmy breezes and discussing sweet music. Very grand, no doubt, but what is there in it all of horticultural taste and refinement? Nothing that I can see at South Kensington would for a moment lead a horticulturist to take interest in seeking its continuance, to say nothing of the weightier consideration to him of advancing the art to which his every idea is wedded. The only way in which it can or has advanced horticulture, is by its appropriateness for the holding of the Society's meetings and exhibitions. This, if I remember rightly, was the primary object in the acquisition of the Kensington Garden. Its object has been lost sight of, and horticultural Fellows can see only their subscriptions expended upon subjects foreign to the exalting of that they have at heart—the advancement of horticulture.

Now, the pointing-out of a nuisance without suggesting a remedy is said, instead of lessening the evil, to only render it more offensive, and as the estrangement seems to be of taste and the difficulty one of debt, it is only fair that those causing the one should make up the other. Surely those who have had the garden as a promenade can well afford to meet any claims for expenses incurred in view of the advancement of their particular ideas and for their especial gratification.

In future it is to be hoped the claim of gardeners upon the Society will not be ignored, for what society professedly horticultural can exist which is not representative of the encouragers as well as the workers at the art? Every other body but this admits the claims of workers to a representative interest in matters which concern them equally with the promoters: hence boards of conciliation and arbitration are just what the Society at present needs to set things right. The days are waning when the labour by which the exhibitions are upheld will not be maintained by a monetary consideration. The labour which brings to the exhibition-table the perfection of horticultural products has a right to a representation of its interests in an intellectual manner, which is an admitted power in every industry; and any society professing to advance any art which does not admit to a fair representation in its counsels and management of affairs of all parties interested therein comes to nought, failing financially as this has done.

The claims of gardeners have been made before, and I do not see why they should not be admitted to fellowship as justifiably as those who are more favourably circumstanced as regards this world's goods, and on that account can afford to pay a higher subscription. A guinea gardener-fellowship as proposed by, I think, Mr. Wilson and seconded by Mr. Douglas, is a fair proposition, and would give the labour side of horticulture a reasonable representation. Advantages they might have in proportion to the value of their subscription, this to be settled by a committee composed of an equal number of the several rates of subscribers. But there could not be a fair representation unless voting by proxy were established. It would be most inconvenient to attend its meetings personally, to say nothing of needless expense, when an opinion could be recorded equally well before as after a subject was verbally discussed.

The subject has cropped out from having the pleasure to treat of a Cucumber which bears the Douglas motto, "Tender and True." It is, indeed, a grand sort, of free growth and hardy constitution, a short neck and nose, of even thickness, very regular outline, carrying a fine bloom, the flower well borne. It is very free-bearing, and commences to do so in its early stages—earlier than others, swells kindly and quickly; the flesh of a good green colour, crisp, and excellent in flavour. It is superior in length to Blue Gown, being a long kind—30 inches long when well grown, and good alike for exhibition or table use. Unquestionably this is the finest Cucumber in cultivation, and its merits cannot be too extensively known, which must be my excuse for so early in the season alluding to it. Duke of Edinburgh (Munro's) is also a very free-bearing sort of the Sion House class, with very short neck and nose, and about a foot in length, very regular in outline, and every way good. The flesh is crisp and good-flavoured, and it appears to have a good hardy constitution. What Tender and True is among the large kinds this is in the smaller, decided improvements upon older varieties, Tender and True being superior to all other, every purpose considered.—G. Abbey.

RABBIT-PROOF PLANTS.

In accordance with your request to your readers on page 378, I will in a few words relate my experience of plants rabbit and hare-proof or the reverse, founded on several years' observation in a place where rabbits and hares are more destructive than I have ever observed them elsewhere.

Rhododendrons are the only evergreens never touched by them. The common Yew, Privet (especially the oval-leaved sort), common and Portugal Laurels, Aucubas, Sweet Bays, Escal-

lonias, Thujas, Gorse, Laurustinus, Evergreen Oaks, and coarse Hollies are more or less eaten. Amongst deciduous trees and shrubs I have only observed Birch, Blackthorn, Elder, Sea Buckthorn, Laburnums, and Dogwood entirely escape the ravages of ground game, though Elm, Alder, and Horse Chestnut are seldom attacked except in very severe weather. Of the Fir tribe Pinus Laricio and P. insignis are rarely if ever touched. Pinaster, Scotch and Silver Firs are more or less eaten, and the Austrian Pine worse than any other sort. Fuchsia Riccartoni, Weigelas, Deutzias, Willows, and Hydrangeas are often eaten.

Hares are more generally destructive than rabbits; for instance, Aucubas, Portugal Laurels, Bays, and other plants are, I believe, seldom if at all eaten by rabbits, but are often destroyed by hares. It is easy enough in many cases to tell whether the mischief is done by rabbits or hares.—J. Ellam, *Bodorgan*.

OUR BORDER FLOWERS—TRILLIUMS.

It would in all probability be a difficult matter to find a family of plants less known than are the Trilliums, for though introduced a great many years ago we seldom see them in cultivation. On one occasion, being desirous of possessing some of them, application was made, but the answer received was, "We only have the store plant, and should not like to part with it." It was quite right to keep the stock, but why should one of Nature's choicest gems be so far in the shade? Is it that they are not known, or that they are not cared for, or both? Perhaps the truth is that they are little known and less cared for or understood; if so, no wonder that we so seldom meet with them in cultivation. There is sometimes less success in thought than in action. Thinking that a plant or subject is difficult causes us to pass by what we ought to attempt. Some thirty years ago, when looking over Mr. Backhouse's nursery at York, I noticed a plant standing on a path evidently intended to benefit by the genial atmosphere of a lovely April morning. The thought arose, What have we here? The label denoted Trillium grandiflorum. I shall never forget that plant. The Trilliums are a very singular as well as a very beautiful race of plants, and they certainly should be extensively cultivated.

It is said they are increased by seed, but to the present time I have not been fortunate enough to secure seed. They may be increased by division, but it almost unnerves one to attempt the operation; but as the old adage has it, "Nothing venture nothing have." They may be grown in pots as alpines, but should have thorough drainage, and be kept plunged where they can enjoy the sunlight and be protected from the wind. They will succeed on a sheltered part of the rockery, but it is well to protect the crowns in the winter. Much time, care, and patience is required to work up a stock, and when once well established let well alone and do not needlessly disturb them. They are quite at home in the cold fernery under glass.

After thorough drainage has been secured, a compost two parts sandy peat, one of good fibrous loam, a little leaf mould, a good sprinkling of silver sand, and charcoal dust with knobs of freestone, well mixed together, will afford them a good medium for their roots. White and red are the prevailing colour of the flowers, and in a mixed group they produce a grand effect. I have never seen them fully exposed in the ordinary border. If taken in hand they would prove an addition to the early spring exhibition.

Trillium grandiflorum is most common, and one of the best. T. atropurpureum I have not yet seen. T. sessile has much the same appearance as grandiflorum. T. pumilum is of dwarf habit, and desirable for contrast of colour. There are other species, but they are only to be seen in very choice collections. They ought to be taken in hand by some clever hybridist, and let us have a more sturdy race, for they ought to be seen in every garden where choice plants are in request. —Veritas.

[Trillium grandiflorum staged by Messrs. Rollisson & Sons at South Kensington on the 12th inst. was one of the most attractive plants in the Exhibition.—Eds.]

PACKING GRAPES, NOT TO BE EXHIBITED.

Take a garden basket of the ordinary shape, with sloping not straight sides, line it with cotton wool bottom and sides, and pack the Grapes stalk upwards as tight as they will go; tie tape to distinguish the stalk of the last bunch put in, as it is the first that should come out, and put paper over the basket. No guard or porter can turn it on its side or lift it otherwise than by the handle, and the said handle prevents anything being put on the top of it.—R. T. F.

THE DORONICUMS.

Where hardy, free-growing, bright yellow flowers are required in the month of May, no genus will supply them better than this. For a bold mass of yellow even the proverbial "sea of Daffodils" cannot surpass the glittering effect of a wavy expanse of Doronicums. The plants are very old, very hardy, and of very easy culture. They are not at all particular as to soil, and will grow both under trees and in exposed situations. Before the advent of spring gardening they were regarded as of little value, and the clumps were left to struggle for existence in the cottagers' plots and shrubbery borders where they happened to be situated. They are now considered worthy of better care, and have even won a place of being exhibited in pots at the Royal Horticultural Society's Gardens. For bold masses of colour, for distant effect particularly, they are admirably adapted. Their collective effect is greater than their individual beauty, and hence they show to advantage in large clumps and broad lines.

They are composite flowers belonging to the natural order Asteraceæ, and are increased by root-division. They may be removed safely with balls of earth as soon as they have done blooming, and can be replanted in their flowering quarters in autumn or very early in the spring. D. Columnæ grows about 2 feet high, and D. austriacum, D. cordifolium, and D. caucasicum about a foot high. These are the best, and flower in May. D. dentatum and D. scorpoides are also early bloomers. D. altaicum is a white summer-flowering variety, but the spring-bloomers are the most useful and recommendable. The Doronicums are the brightest hardy spring-flowering plants we possess, and being in perfection at the same period as Aubrietias, Arabis, Hepaticas, Polyanthuses, &c., enhances their usefulness.

These plants are likely to be more extensively used in the future than they have been in the past; and those who are anxious of keeping abreast of the times, and who covet a share in the "latest fashion" of garden decoration, would do well to add Doronicums to their list, or if they already possess plants to increase their stock by dividing the roots. When the plants have done blooming, north or partially-shaded borders are good positions for increasing and preparing these plants in summer, from whence they can be transferred to their blooming sites when the beds or borders are cleared of their summer occupants in the autumn. Patches or lines in shrubbery borders if left undisturbed will continue to bloom freely for many years. For such positions these hardy spring flowers are very suitable, and should be planted freely wherever bright flowers in May are coveted.—W.

HELLEBORUS FŒTIDUS.

It is exceedingly rare that Mr. Robson either overcolours or overestimates a plant or subject. Probably on no writer of the day is more reliance placed than on the veteran contributor. He is generally regarded as a "safe" man, a compliment which all writers would do well to win by an expression of plain practice, sober experience, and correct judgment. Yet I am inclined to think he overestimates (see page 344) this plant as a hardy ornamental early spring flower. I do not mean to assert that it is not what he describes it to be—viz., hardy, and in general appearance ornamental. It is indeed extremely hardy, and its foliage and habit of growth is agreeable, but the flowers—of which too much may be expected by those not knowing the plant—are dingy and devoid of any effect which is usually looked for in spring plants. I have grown it as a spring bedding plant, but my employer told me not to grow it again. It is interesting but too dull—sombre rather than cheerful—therefore not likely to become popular.—A Town Gardener.

Wistaria consequana.—In the gardens here, Brynkinalt, Chirk, North Wales, the seat of the Right Hon. Lord A. E. Hill Trevor, M.P., there is at present (May 21) in full flower, and has been so for the last three weeks, two plants of Wistaria consequana (sinensis) which for size and profusion of bloom I have not seen equalled. Such cover a space of wall 56 by 13 feet, and carry, roughly calculated—as it is almost impossible to do so accurately—about 2200 racemes of their lavender-

coloured flowers, many of the racemes being over 12 inches in length. From some of the spurs depend fifty racemes. I should like to hear if many such plants are in existence. I may add that these plants would have covered many more feet of wall, but are prevented doing so by vineries on either side.—J. A., *Gardener*.

THE GALEGAS.

Now that hardy flowers are having a reasonable share of attention bestowed on them, and are again deemed worthy of a place in our gardens, it is not inopportune to note the merits of this useful genus of border plants.

The Galegas are very old and very hardy Leguminous herbaceous perennials, and are known by the popular term of "Goat's Rue," in reference to an old idea that the herbage was superior for milch cows and goats. About half a dozen species are cultivated, the best being G. officinalis and its white variety alba, and G. orientalis.

G. officinalis is one of our oldest border plants, having been introduced from Spain more than three hundred years ago. It is only to be found where collections of hardy plants are cherished, or where it has taken care of itself in some shrubbery border where it has been tolerated to continue. Little more than a toleration to exist it does not require, for it has a most accommodating nature, and will grow and flower year by year with as little attention as most plants. And yet it is not only agreeable but decidedly ornamental; indeed, it is one of the best of tall-growing back plants for the herbaceous border. Its sprays are ever in request for cutting for bouquets, possessing an airy lightness and an Acacia-like foliage, which group to advantage without flatness and formality. Besides, the flowers are of a colour which is pleasing and always welcome, being of a lively light blue. They are produced with great freedom from the axils of the leaves, and the long spikes are very effective. The plants commence flowering in July, and continue until the autumn—indeed, until the growth has ceased, for so long as the plant grows it flowers.

Fig. 98.—Galega officinalis.

The height of the plants depend on the nature of the soil. In rich ground they attain a height of 3 to 4 feet, but in poor soil not more than half that height, but in each case they flower profusely; moreover, the plants will bear cutting and pinching, and are easily kept within required bounds. This and the white variety are two very useful border flowers where hardy plants of moderately robust growth are in request. They will flourish in any ordinary garden soil, and only require to be staked and neatly tied, and to be pinched when necessary to keep them in order. They will flourish on the same site for many years, providing their fleshy roots are not ruthlessly mutilated in winter digging.

They are increased by root-division during the spring and early summer months, the plant, in fact, being so easy of growth as to bear removal almost at any time when not in flower. These are free-growing yet compact and pleasing border plants, and worthy of cultivation for their ornamental appearance, and for their usefulness in affording a supply of flowers for cutting.

G. orientalis and the rest of the species are more weedy and spreading than the preceding, still where a love of hardy flowers prevail they are desirable as affording variety. But for general usefulness the species now figured and its white variety are the most worthy.—W.

CONIFERS IN EXPOSED SITUATIONS.—No. 2.

Crimean Silver Fir (Picea Nordmanniana). This Conifer, handsome as it is, does not stand the wind well, and becomes depressed in habit, the perpendicular growth being slow and weak. The leaves are somewhat browned in winter, and the last year's growths have a sickly yellow hue in spring. In moderately sheltered positions it does better and is fine, its bright green foliage contrasting well with the dark glaucous shading of P. nobilis.

Noble Silver Fir (P. nobilis). This is of free growth, not suffering from wind and exposure, and in my estimation is the finest of all Conifers; its dense dark green foliage, silvery or glaucous beneath, having an extremely beautiful appearance.

Spanish Silver Fir (P. pinsapo) is a particularly handsome tree, its growth being peculiar. The numerous branches are produced in whorls, every leaf and branch being arranged with perfect symmetry, and is highly ornamental. It is not injured in the least by wind, but grows vigorously, forming a specimen of great beauty.

Great Californian Silver Fir (P. grandis). Of this there are evidently two varieties perfectly distinct, and of different degrees of hardiness. One variety is somewhat sparse of leaves, which are rather long and slightly curved or curled. This grows but moderately, and is so cut by a hard winter as to lose some of its leaves in spring. It is very handsome notwithstanding, but is not so hardy nor so free in growth as the other, which is more dense in foliage, of deeper green, and grows 2 to 3 feet in a season, truly a beautiful quick-growing kind; it is occasionally slightly browned by cutting winds.

The Common Silver (P. pectinata), and Balm of Gilead (P. balsamea), do not do well except in sheltered positions, and there they attain noble proportions. In exposed positions the growths are browned, which spoils their appearance.

Siberian (also Swiss) Pine (Pinus Cembra). The upright conical growth and dense glaucous shading of the leaves, which are deep green on the upper surface, and from its habit taking up little room, renders it one of the most desirable Pines for a small pleasure ground, especially where something evergreen and taller than shrubs is required. It is also one of the best for planting in the neighbourhood of towns. In very exposed

positions its leaves are slightly browned in winter, but with only moderate shelter it does well, and is very handsome.

Lofty Bhotan Pine (P. excelsa) is rapid-growing and spreading, having a spread at the base of the branches often more than twice the height of the trees. To say that it is beautiful is not adequately expressing its value, for its distinctness, and bluish green drooping leaves and bright green of its wood render it peculiarly attractive. Its branches lying flat upon the ground render it a favourite resort of ground game, and pheasants make choice of it for roosting and nesting; it stands next to the Corsican Pine for escaping the ravages of hares and rabbits, which, except when fresh planted, do not eat it. Except in a very exposed position its leaves are not browned in winter, and in a moderately sheltered site are not at all injured. For rapidity of growth it is about equal with the Corsican Pine.

Weymouth Pine (P. Strobus) is cut by both the east and west winds. In an exposed position it soon languishes and dies. In a moderately sheltered situation it grows about half as well as P. excelsa, which is twice as good.

Pea-fruited Japan Cypress (Retinospora pisifera) is not unlike a plumose form of Lawson's Cypress, but with a brown or pale chocolate tint. It stands wind tolerably well, and grows moderately, and is very desirable for partially sheltered positions.

Maiden-hair Tree (Salisburia adiantifolia) grows moderately, and neither the wood nor the young leaf-growths are injured by cold.

Californian Redwood (Sequoia sempervirens) has all its growths browned and killed by a severe winter, except a slight portion of the ripe wood, from which it puts out fresh shoots annually. It has been recommended as a screen or hedge plant, and in sheltered positions it may be useful for that purpose, bearing cutting very freely.

Common Deciduous Cypress (Taxodium distichum) makes its growth so late, and the wood consequently is so unripe, that the frosts of a severe winter destroy all but the firm wood at the base of the annual growths.

Common Yew (Taxus baccata) has the young growths of vigorous plants injured by a severe winter, having a browned appearance. With moderate shelter it does well. Its varieties erecta (stricta of some) is not at all injured, nor does the beautiful elegantissima (argentea) suffer from a severe winter with moderate shelter.

Irish Yew (T. fastigiata, also hibernica) exposed to the full east and west winds grows slowly but uninjured; with only moderate shelter it does remarkably well, its deep green close growth having a fine contrasting appearance with lighter surrounding foliage.

Taxus adpressa stricta, a cone with a broad base; does only moderately, the growths in spring having, from the effects of a hard winter, a sickly appearance.

Lobb's Arbor-Vitæ (Thuja Lobbii Menziesii) is of quick growth, and is very flexile; just the habit to withstand wind, which it does remarkably well. It is not injured by severe weather; but hares and rabbits are very fond of its spray.

American Arbor-Vitæ (T. occidentalis) is browned—brown as it usually is; but I cannot say it suffers any injury by a cold exposure. The same remark applies to its variety compacta, which is of much more bushy growth.

Siberian Arbor-Vitæ (T. Wareana) grows slowly, but is not injured. T. orientalis is not positively damaged; but it grows very little. Its variety elegantissima is very beautiful, and not injured.

Nootka Sound Cypress (Thujopsis borealis) stands uninjured, and is very free-growing and beautiful; next to Lawson's Cypress this is the finest introduction of late years. It is a handsome shrub for a lawn.

Mammoth Tree (Wellingtonia gigantea) in an unsheltered position grows slowly, and stands the east better than western winds; these having greater force drive the tree eastward, or inclining in that direction. In moderately sheltered positions it grows quickly and straight as an arrow, forming a conical rather pyramidal tree of dark green aspect, slightly browned by a severe winter. Two years ago I moved several of from 6 to 12 feet high, and though all have done fairly the removal caused them in most instances to produce cones; one, a plant of about 6 feet high, has several cones, which have every appearance of ripening perfectly. Another tree, which was not moved, had also last year a mass of cones showing, its branches really matted with them; the tree has become very sickly, in fact is only just alive. There is no disputing the fact that this tree (Wellingtonia) is very much behind many others in point of growth and suitability in a high and exposed situation.—G. Abbey.

THE OLD MARKET GARDENS AND NURSERIES OF LONDON.—No. I.

The man who takes London or London belongings as his theme ensures a measure of success at the outset, for what has to do with the "million-peopled city" has a national interest. In writing, therefore, upon London market gardens and nurseries, I feel that it is not at all necessary to suppose that I am addressing those only who are residents in or near the capital. It is to be hoped that many non-gardeners as well as gardeners are not uninterested in such a subject as this, upon which a good deal might be said. As some limitation is desirable, the reader will understand at the outset that my present topic is the old market gardens and nurseries, such as were existent about London fifty or a hundred years ago, or even dating still further back. The majority of these have now totally disappeared, leaving no trace except, perhaps, a name attached to a locality, or here and there a tree, standing now in smoky and melancholy guise in some back garden, the history of which no one now living is aware of, but which was once a promising shrub in a nursery where gentlemen and dames of the days of King George III. strolled up and down to admire the latest importations from foreign countries. The ceaseless demand for land at an easy distance from the great centres of city bustle, rather than a cessation of the trade carried on through these nurseries led to their disappearance, and as old proprietors retired with a competence, new market gardeners commenced business at a greater distance from town; though these also in their turn, who, starting, perhaps, twenty or thirty years ago in districts which then seemed safe from the inroads of bricks and mortar, have had to yield to the demand of the times, and migrate further off where ground is cheaper and the influence of London smoke not so marked. We find in the case of some market gardens that they struggle on for existence despite their environment with masses of buildings, as long as the lease under which they are held permits the occupier to remain, until its expiration concludes the life of the sickly plants, that have somehow gone on from year to year on short commons of light and air, and the case of the "survival of the fittest" is fully demonstrated. It is only a very few years ago, for example, since a kind of small nursery garden disappeared which occupied the centre of Ebury Square, Pimlico, the sole survivor of various nurseries formerly thriving in north and south Belgravia. Now and then a famous nursery ground has been closed, and its proprietors removing farther a-field, have carried with them the old name and its traditional repute; but instances of this kind are not numerous.

Some readers may be tempted to remark, that considering the rapid growth of London suburbs during the last score or two score years, it does not seem as if the number of market gardens and nurseries had increased in proportion. There is now certainly a larger extent of land under cultivation for market purposes within, we will say, a dozen miles of London, than there ever was before, yet it is quite true the produce only serves to supply a moiety of the population. Railway facilities for the quick conveyance townwards of vegetables and fruit have revolutionised matters, and enormous quantities of such produce reach London from distances impossible in the days of our grandfathers. Yet we must not plume ourselves that we have brought things to a state approaching perfection. Something needs still to be done in the way of moderating the rather fancy prices which certain articles fetch, and also in supplying vegetables to the table in a fresher condition than appears possible under present arrangements. I will give an instance of which any resident at the west end of London has ocular proof when he glances at the streets. Frequently at early morning he will see heavily-freighted waggons bound for Covent Garden Market, well heaped with vegetables that have been pulled or cut in the market gardens of Fulham or Hammersmith. Yet it is not always the same day that these same vegetables arrive in the shops of those who are to supply the public, and when in the shops they are liable from several causes to a further detention. Far be it from me to argue that what I may call the "middle-men," should be abolished; but it does seem a pity that the grower and the retailer cannot be brought a little closer together. Not to dwell on the question of a loss of freshness, there is a needless outlay in carrying right into London from districts like

Fulham and Hammersmith produce that has to be taken back again to Chelsea, Brompton, or Kensington to be eaten.

When I first commenced essay writing, I remember that the advice was given—advice, doubtless, well meant and not without its value—that in commenting upon some historical subject we must beware of going back too far to make a commencement. It is seldom necessary to begin with Adam and Eve, or to allude to Noah and the Ark. With this caution before me still, somehow my mind reverts to the time when London had no nurseries or market gardens—when the town, "if town it could be called, which town was not," consisted of an irregular group of huts placed on the margin of a piece of water so extensive as to form an inland lake, whence, so think authorities, arose the name London, the City of the Lake. The mouth of the Thames was probably near Richmond, and this lake, part of which was shallow enough to be called a marsh, overspread those Surrey districts contiguous to the Thames which we now know as Lambeth, Battersea, Wandsworth, and Southwark, behind which rose the Surrey hills mostly clothed in wood. By the way of Greenwich and Plaistow, past Kentish localities that are even yet marshy, the inland waters reached the sea, flowing irregularly along a track several miles across between the higher grounds of Kent and Essex. Finsbury and Fenchurch tell us where marshes were situate to the north of the Thames, but the greater part of the land in this direction was forest. Our worthy British ancestors had little idea of cultivating the soil, living mainly by the produce of the fishery and by the chase. No doubt they qualified the animal diet at times by eating herbs raw or rudely cooked, the wholesome or injurious qualities of wild plants being discovered by experiment.

The Romans unquestionably were the first horticulturists of London, for though long renowned as a hardy, self-denying race, a people of iron-like temper and power, by the time they were dominant in Britain the Roman empire was verging towards the age of luxury. Having colonised London, the Romans speedily set about the improvement of the town, and by artificial drainage they reclaimed much fertile land and brought it under cultivation. According to one list, more or less correct, they introduced the "Plane, Lime, Elm, Poplar; also the Pear, Damson, Cherry, Medlar, Peach, Apricot, Quince, Fig, Walnut, and Chestnut; as well as various Roses and other flowering plants and herbs." Though subsequent events under Boadicea and others brought destruction to the Roman residents and the fine gardens they laid out in London, still there was from that period an onward movement in the way of metropolitan flower and fruit growing. Incidentally it may be noted, that as we might conjecture from the descriptions given of the locality in the early centuries of Christian era, the climate of London was more moist and warm than in later times.

Passing on, then, for contrast not to our own day, but to a period of some sixty years ago, we read that by the best calculations about twelve thousand acres of land in Middlesex alone, not to speak of Surrey, were cultivated in order to supply the metropolis with the produce of the garden and orchard. It is not so ascertainable what extent of market gardens lay on the Surrey side at the beginning of this century—by conjecture there were two or three thousand acres at least, laid out there for the same purpose—but the bulk of the supply for London needs of this sort came from Middlesex. Across the river, even when Her Majesty the Queen came to the throne, the growth of London had been insignificant, though under the Georges it had spread northward, eastward, and westward. The old distinction between London and Southwark was kept to with some tenacity, and residents in the "Borough" scarcely considered themselves Londoners. It is in Kent and Surrey that market gardens have shown a rapid tendency to increase, as Middlesex became gradually, in the suburban districts, less available to those cultivating land with a view to large profit. One author, I may observe, makes out that those who had merely market gardens did sixty years since get an average profit of more than 50 per cent., and nurserymen must have cleared more in spite of fluctuations. The advance in the value of labour and a reduction in retail prices must have tended recently to lessen profits; but then, again, we now see a variety of improvements in cultivation are pretty generally adopted. Hundreds of years ago there were some sagacious enough to note how extremely suitable the land near London was for horticulture, not only from the soil being much of it of a loamy nature and mostly well drained, but, in addition, intersected by numerous small rivulets flowing towards the Thames; also, as Brewer observes, there is an absence of inconvenient ridges, nor do stones crop-up too profusely.

Old Nordeu's comments on the Middlesex garden land are quaint. He admits that the roadways in the country, however, were far from being in a desirable condition. "This so fruitful soil," says he, "does not yield comfort to the wayfaring man by reason of the clayish nature of the soil, which after it hath tasted the autumn showers waxeth both dirty and deep, but unto the husbandman it is a sweet and pleasant garden in regard to his hope of future profit. For

> 'The deep and dirty loathsome soil
> Yields golden grain to painful toil.'"

And there was a time when the vicinity of London had many corn fields besides market gardens; the corn coming to maturity several weeks earlier than in the adjacent counties. —J. R. S. C. .

GREYA SUTHERLANDII.

Among the many important contributions to botanical science for which it must ever be indebted to the amiable and lamented Dr. Harvey, his "Flora Capensis," or Plants of South Africa, is not the least important. While engaged in its preparation he was one day sitting in his rooms in college with some dried specimens of South African plants lying before him. With one of these, as Dr. Moore of Glasneven happened to call on him, he just then appeared to be specially occupied. Handing the specimen to him, coupled with the remark that some eminent botanists with whom he had been in communication with regard to it were puzzled as to the order to which it should be referred, he asked Dr. Moore to look at and say where he thought this interesting nondescript should be domiciled. Having examined the specimen carefully, Dr. Moore returned it, confessing at the same time that he was a good deal puzzled, but that he thought, if not actually belonging to, it came very near Saxifrageæ. "Good," replied Dr. Harvey, "it is exactly there I have placed it." While they were speaking Dr. Moore noticed something like seed or a seed capsule, we are not sure which. This was promptly laid hold of, carried home to Glasnevin, sown, and the result was, raising in that establishment—for the first time in Europe—plants of Greya Sutherlandii, than which we believe a more telling or more sensational subject has not been or could be taken in hand by the intelligent and high-class plant-grower. For the first time in Ireland this remarkable plant has quite recently flowered at Glasnevin. This and once at the Chelsea Botanic Garden are the only occasions on record, we believe, of its flowering in Europe.—(*Irish Farmers' Gazette.*)

[It does not belong to the natural order Saxifragaceæ, but to the Sapindaceæ. A very good portrait of the specimen which flowered at the Chelsea Garden is in the "Botanical Magazine," *t.* 6040.—Eds.]

CONIFERS FOR EXPOSED SITUATIONS.

Mr. Abbey should add Pinus insignis to his list of Conifers for exposed situations, if near the sea or in a mild climate. It is undoubtedly the finest and most distinct of all Conifers for such localities. Its rapidity of growth is greater than that of any Fir I am acquainted with, and its bright lively green colour and dense though free habit of growth render it one of the finest, if not the finest, of the Pine tribe. When once established its hold of the ground is such that no wind uproots it. It starts into growth very early in the season, and hence is apt to be injured by severe late frosts. The climate at this place is very mild, and consequently P. insignis never suffers from the above cause here.—J. Ellam, *Bodorgan.*

DENDROBIUM CARINIFERUM, *Reichenbach.*

This nigro-hirsute Dendrobium, one of the most beautiful of the genus, is very little known. It only requires to be seen to be thoroughly appreciated. It was named by Professor Reichenbach in 1869, but he does not in his description of the plant say who sent it to him. It does not appear to have been sent to the herbarium at Kew until 1873, when it was sent from Upper Burmah by Major Berkeley.

It is abundant in Upper Burmah, and it is surprising that so few plants of it find their way to England. It is probably in consequence of the plant not being well known. When out of flower it is frequently confounded with the commoner kinds

of nigro-hirsute Dendrobiums, and therefore not thought worth collecting. It may, however, be easily recognised at any time by the peculiar form of its stem, which tapers off very suddenly at the bottom, quite unlike the stem form of any of its allies.

It is nearest allied to Dendrobium xanthophlebium, but is decidedly distinct from that plant. The ground colour of the flower is ivory white, the texture of the same being thick and shining as in Dendrobium hedyosmum. The flowers are

Fig. 99.—Dendrobium cariniferum, *Reichenbach*.

beautifully tinged throughout with cinnabar red, especially so about the sepals; and the labellum is always brightly marked with the same colour; the keels of the three sepals are highly developed; the petals are cuneate, oblong, acute, reflexed.

This plant grows well on a block of wood, and is very easy of cultivation. The flowers vary considerably in colour in different plants, some plants being very highly tinged throughout with red, whilst other plants are nearly pure ivory white, the labellum only being brightly coloured. This variation of colour makes the plant all the more desirable, and when better known it is sure to become a favourite. The flowers are sweet-scented.

The drawing is taken from a plant in Major Berkeley's collection.

Sparrows.—Some time ago one of your correspondents thought that these birds were unjustly maligned. This year, for the first time I admit, they pecked out the centre of every Carnation in my garden, though the plants were in several

distinct patches. Both my gardener and myself saw them actually at work.—G. S.

THE FLAMINGO PLANT.

The collection of the brilliant Anthurium Scherzerianum is just now one of the "sights" at Messrs. Veitch & Son's nursery at Chelsea. Hundreds of fiery spathes are upspringing from the healthy plants, and will continue a blaze of beauty for months to come. The collection of this plant is exceedingly large and fine.

This plant holds the same rank in our stoves in summer that the Poinsettia does in winter, and both are alike indispensable in their respective periods. Like the Poinsettia, though a stove plant, the Anthurium is admirably adapted to conservatory decoration. It is much less tender than is supposed, and although heat is required to grow it in perfection it is quite safe in a conservatory temperature during its blooming season, and also at the resting period a high temperature is not an absolute necessity.

It is more than probable that the time will come when collections of the Flamingo Plant will be found in every garden where gay-flowering plants are required and where well-heated vineries are provided in which to prepare the plants, for experience is proving that the plant will safely pass the winter in a much lower temperature than was at first imagined, and that a high stove temperature in winter is not essential. It is a plant that should not be grown merely to represent the species or simply to add to a collection, but, like the Poinsettia, should be cultivated by the dozen or hundred, according to the demand for decorative plants during the summer months. For associating with Ferns nothing can be more effective for room and corridor decoration, and the plants will not suffer nearly so much under those circumstances as do many stove plants.

The culture of the plant is very easy. Mistakes have been made by potting it too low and in a compost too close. It is by nature an epiphyte, and is found growing on the trunks of fallen trees where Mosses and other Cryptogams vegetate. It is well to bear that in mind, as it is suggestive of the particular culture required by the plant. A suitable compost is lumpy peat, sphagnum, leaf mould, charcoal, and sand, to be mixed to form an open fluffy mass. For small plants pots must be used, but they should be more than half filled with drainage, to be covered with a flake of moss, and the plant be potted high above the rim of the pot, after the manner of Orchids. For large plants pans are preferable to pots. About four to six weeks after potting when the roots are showing through the surface cover with green flake moss, into which they will penetrate freely. They should have a high temperature at starting, and be frequently syringed. The plants grow slowly at first, but when once established they are rapid in their movements, especially if stimulated by clear weak manure water. That made from horse droppings has been found to assist the plants considerably; cow or other cooling manures are, no doubt, equally suitable, but guano is not recommended. An average temperature of about 65° is suitable, but they are capable of enduring a much lower and will also flourish in a higher temperature. We have seen them luxuriating at 80° to 90°, and looking quite happy in 50° to 60°, and have further known them to be wintered in a house which was commonly down to 45°. There is, therefore, abundant evidence to suppose that this plant is not delicate and tender, and that it may be grown in any garden which has convenience to ripen Muscat Grapes.

The extended culture of this plant is recommended as one of the finest summer decorative plants ever introduced to our gardens. The white variety, A. Scherzerianum Williamsii, now being distributed by Mr. B. S. Williams, is a fine companion plant to the above. Although the spathe is comparatively small at the present time and in young plants, it is certain to increase in size under cultivation. The scarlet species when it first bloomed at Kew had spathes of only about an inch in length, and they are now commonly seen of three times that size, and, indeed, Mr. Ward has exhibited a plant with spathes 5 inches long. This is mentioned lest disappointment be felt by observing blooms on small plants of either the scarlet species or its white variety, and which will certainly increase in size as the plants gain strength.

Anthurium Scherzerianum was discovered in Guatemala by M. Scherzer, and was subsequently found at Costa Rica by Wendland, who sent it to the Royal Gardens of Hanover, and from thence to those of Kew, where it flowered in April, 1862. It is figured in the "Botanical Magazine," vol. lxviii., t. 5319.—W.

APPROPRIATE POTTING.

Never did we see a more forcible illustration of the importance of being "well-fitted in the arts" than when we saw plants unsurpassably well grown rendered repulsive by being in vulgar, highly-reddened, common garden pots. They were in the entrance hall of a mansion. That hall was fitly furnished, everything around was congruous, neat, yet elegant. Nothing was discordant but the flower pots, they were rude and offensive both in form and colour; they were unfitting both to the place and to the plants growing in them.

Common pottery is suitable to the greenhouse and frame, though in the first-named structure, if a place in which visitors are expected to take pleasure, the plants are far more attractive if the shelves to receive them are so made that the pots are concealed, and the surface of the soil in them is covered with moss.

Fig. 100.

In the hall or corridors of a mansion the plants should be in porcelain pots. An illustration will enforce what we mean. How deprived of effect, how degraded would this Caladium appear if in a common flower pot!

It quite suffices that the plants be prepared in ordinary pots of a correct size that the pots in which they are grown may be inserted as required into the ornamental pots. No injury is then done to the roots, and it is surprising in what a small pot a plant may be healthily grown if assisted by a full supply of water—liquid manure when suitable to the nature of the plant. Preferable to common clay pots are ornamental latticework covers, or elegant designs which are now worked by the fret saw. Some of the latter are very attractive, and are permissible as substitutes for the more valuable porcelain receptacles.

NOTES AND GLEANINGS.

Lord Henry Lennox, the First Commissioner of Works, in opening to the public the garden adjoining the Bethnal Green Museum on the 19th inst., remarked that the preservation of open spaces would form a cardinal point in the policy of any Government in power. His lordship pointed out that the inhabitants of the east end of London had also Victoria Park and Epping Forest as open spaces. Mr. Samuda, Mr.

Richie, and others interested in the open-space movement took part in the proceedings.

—— Lyons Rose Show.—A great and special Exhibition of Roses will take place in Lyons on the 11th, 12th, and 13th of June next. Several new seedlings will appear there for the first time. The jury will be composed of the principal rosarians of Europe.

—— Mr. E. Bennett, recently head-gardener to the Marquis of Salisbury at Hatfield, has left that place, and is now in business on his own account at Rabley Nursery, near Barnet, Herts.

POROUS GARDEN POTS.

A writer in a contemporary journal considers it waste of time to wash pots, unless where the potted plant is to be shifted on into larger sizes. I am not going to discuss this question, but to notice that the writer quotes Dr. Lindley as having said that "experience has settled" that plants thrive as well in pots of glass or slate as of porous earthenware.

Now I ask, Is this true? because if it is the labour of watering would be much lessened, and the roots saved from the chill which constant evaporation from the sides of the pot must produce. The Chinese, I believe, sometimes use glazed pots.

In order to lessen evaporation I once smeared with linseed oil, and then painted, several pots containing Peach trees. I cannot say that the trees looked the better for it, and I have not continued the practice. In Italy, I understand, trees, particularly Oranges, are thought to thrive better in wooden boxes than in porous earthenware. The subject is one which deserves ventilation.—G. S.

[We shall be obliged by any of our readers writing to us what *practice* has taught them on this subject.—Eds.]

FLOWER MISSIONS.

[We have received letters giving us far more credit than is our due for advocating these missions, we only aided the good movement that had been commenced. We have been asked for directions how to establish such a mission, and the best answer is contained in the following letter sent to the *Times* by Mr. S. Walliker, Post-office Buildings, Hull.—Eds.]

"The work of collecting and distributing flowers for the sick and infirm poor is so rapidly spreading, and is productive of so much direct and indirect good, that you will perhaps permit me to give a few practical hints as to the commencement and the carrying-on of the work which have suggested themselves as the result of upwards of two years' experience, during which time about thirty thousand bunches of flowers have been distributed among the poor of Hull. The system adopted here has been framed with the view of saving all possible trouble to those who send, as well as to those who distribute the flowers. A depôt was selected in a central situation convenient for the reception of flowers brought by rail, boat, or carrier; it is open all day, and someone is always at hand to receive the flowers and, if possible, to return the baskets and other packages by bearer, and trays about 2 or 3 inches deep, covered with galvanised iron netting and filled with water, are kept ready to place the flowers in, so as both to refresh and preserve them. The ready sympathy of the local press was secured, and is still in active operation, and the public were requested to send flowers, made up in small posies if possible, to the depôt. To assist the public, stout hampers divided in the centre by an extra lid (the hampers cost 2*s.* 6*d.* each), with two printed leather labels, one bearing the inward, the other the outward address, are supplied to anyone who will undertake to collect and forward flowers. Small printed card circulars are at the same time sent to those who are likely to contribute to the baskets, advising them as to where they are kept and the days on which they will be despatched. A simple record of the date, the names and addresses of senders, and special remarks, is kept, and the receipt of flowers is acknowledged by means of printed post-cards, only requiring the date and address to be written. The distribution here is not confined to the public institutions, but is made also to the sick, infirm, and aged poor throughout the town. To regulate the supplies and prevent waste, printed lists giving the names of all the hospitals, workhouses, &c., and the names and addresses of all the district visitors and others who undertake to distribute to the outside poor, are prepared. These lists have seven columns. In the first, the greatest number of bunches each institution or person can dispose of is stated; the other six columns are for the days of the week. Some visitors cannot distribute flowers on certain days, and in those cases marks are printed in the respective columns opposite the visitors' names. These lists become valuable for statistical purposes and for comparison of year with year. The number of bunches, regulated by previous supplies, to be sent to each institution or person is entered on the lists, and the flowers are sent out in covered baskets (to preserve their freshness and perfume) by a little lad in uniform (a half-time school-boy), who copies on a slip of paper, for his own guidance, the names and numbers. He is paid 3*s.* a-week. When not busy he carries on his studies. During the winter months pots and pans containing mosses and lichens, carrot-tops, wheat-ears and grains of wheat, pots of bulbs, bunches of evergreens, &c., are sent out, so that there is never a week in which something is not done to cheer the poor, especially the sick, and to assure them of the loving sympathy which exists (too often latent, however), in the breasts of their well-to-do brethren. If any lady or gentleman desires any further information which I may be able to give on this subject I shall be happy to render it."

LATE-KEEPING GRAPES.

Mr. Luckhurst has not only communicated a very entertaining but a very useful article on this subject on page 365. He has taken in hand three well-known Grapes, and has communicated, especially on that fine variety Gros Guillaume, valuable information. Mr. Luckhurst will no doubt find several adherents to the estimate he has formed of Lady Downe's Seedling and Black Alicante, but he has had too much experience of the world to suppose that his remarks will carry conviction to all. This, indeed, is not possible; for so long as tastes vary, and soils exert an influence on fruits, so long will there be differences of opinion and matters for discussion as to the relative merits of Grapes.

Mr. Luckhurst commences his letter by acknowledging that Lady Downe's Seedling is generally admitted to be the best late-keeping Grape in cultivation, but doubts notwithstanding whether many of those who find it so valuable could give a satisfactory reason for the preference which they assign it. Satisfactory to whom? that is the question. I, like Mr. Luckhurst, have grown Lady Downe's Seedling, Black Alicante, Gros Guillaume, Mrs. Pince's Black Muscat, and Muscat of Alexandria in the same house; and to dispel any doubt as to the Black Alicante not being the true variety, I may say that it was had from Mr. Pearson. It is the true variety and a fine Grape, but has never given equal satisfaction with Lady Downe's Seedling.

I can give a satisfactory reason for regarding the Grape just named as superior to the Alicante, but satisfactory to whom? My employer and myself. Now, we consider ourselves authorities on those which best answer our own purpose. I think Mr. Luckhurst will not dispute that that is a practical way of judging the matter, and one, withal, that must be recognised and generally adopted.

In the first place we use but very little fuel—that is, we do not start the Vines early, but keep up a good heat during the growing season, in fact sufficient to ripen Muscats fairly well and to produce good crops year by year. Still, it is cool treatment, as very little firing is done; and while Lady Downe's Seedling is splendid in colour and quality, Alicante is comparatively washy and flavourless. It colours well and looks grandly, but it is not half so good as Lady Downe's Seedling and Mrs. Pince's Black Muscat, and hence, despite its fine appearance, Black Alicante is not regarded as the best late Grape.

Lady Downe's has small bunches, but there are a great many of them, while the berries are good, flavour excellent, and keeping properties unsurpassed. With more heat Black Alicante might be better in quality—indeed we have Mr. Luckhurst's evidence that it is; and I hope the rule will hold good generally, for in appearance it is a grand Grape, an abundant bearer, a free setter, and not prone to shank.

Under ordinary treatment I commend as late Black Grapes, Alicante to look at, and Lady Downe's Seedling to eat; not implying, however, that the former is not fit to eat, only that it is inferior to the latter.

As a Grape for sale the true Black Alicante is probably about the most profitable that can be grown. I know it has proved

itself such in two instances where all the ordinary varieties have been tested, but the owners would never eat it themselves, and it was sent to London by the hundredweight. Dr. Hogg's "Fruit Manual" states that Black Alicante has nearly twenty aliases—good proof of its worth; and after describing it the author speaks of its flavour as "similar to that of Black Hamburgh." What could be more correct? But who will eat Black Hamburgh except as a change when Lady Downe's Seedling can be had? But what does the author of the "Fruit Manual" say of Lady Downe's? I turn to page 293, and find it described as a "very valuable Grape, and may be ripened in the heat of an ordinary vinery; richly flavoured with a faint trace of Muscat flavour, but not so much as to include it among Muscats." This is equally precise, as all must know who have cultivated the Grapes, only in some soils the Muscat flavour is much greater than in others, but in none is the Grape destitute of that fine aroma. The work also says that the berries are increased in size but not improved in flavour when grafted on the Black Hamburgh, while on Gros Guillaume it does not succeed so well, but the flavour is improved. On the first stock I have tested it but not on the second, and Mr. Luckhurst may do much to rectify one of the only faults he can bring against Lady Downe's Seedling by working it on the Black Hamburgh stock; and the other—scalding, will, as I have found, be less serious than when on its own roots.

Mrs. Pince's Black Muscat I have found under ordinary temperature to be infinitely superior to Alicante in flavour but deficient in colour. It requires more than Hamburgh heat, must carry plenty of foliage, and have good support at the roots to colour it well. It is then a splendid Grape. Its failing point is in being slow to colour.

I now turn to Gros Guillaume. This, as Mr. Luckhurst observes, is a splendid variety, and, as he opportunely suggests, it is only shy when improperly treated. Pruned on the orthodox spur system and with only ordinary heat it will seldom be satisfactory; but afford it heat, light, and room, and it will return such bunches that no black Grape can equal, and in flavour it is difficult to surpass, only let it hang until February or March. This is a most valuable late Grape, and when pruned long, and young shoots are trained-in annually, it seldom fails to carry a sufficient number of enormous bunches to yield a heavy crop. It is little use attempting to grow this variety where it cannot have room to extend, light to perfect, and heat to mature its growth; but these necessary conditions provided, it will fruit as a matter of course.

But why do we not hear more of Madresfield Court as a Black Grape to succeed the Hamburgh, and to use until the very late sorts are in perfection? It is one of the finest Grapes ever raised; it will ripen and colour in an ordinary temperature, and is a good cropper, free setter, and of superior flavour. —A Northern Gardener.

I am glad Mr. Luckhurst has brought the subject of late-keeping Grapes before the public. I have often wondered how it was that Lady Downe's Seedling should be placed at the head of the list of late-keeping Grapes. I can bear out all Mr. Luckhurst has said about Alicante and Lady Downe's Seedling. My late vinery is similar to that of Mr. Luckhurst; it contains the following varieties—Lady Downe's Seedling, Black Alicante, Mrs. Pince, Muscat of Alexandria, Duchess of Buccleuch, Gros Guillaume, Madresfield Court Muscat, and Bowood Muscat.

I suffer in the same way as Mr. Luckhurst, for in very hot weather the Lady Downe's becomes almost baked, and sometimes to such an extent that many of the bunches are almost skeletons after the thinning. This has occurred, and with abundance of air circulating through the house, from early morning until late in the afternoon. This scalding has never happened to Alicante. Out of all the Grapes I have here enumerated Alicante is the best late keeper. Mine, I feel satisfied, is the true kind, and answers exactly to the description given by Mr. Pearson; indeed I believe the Vines were supplied by Mr. Pearson.

To grow the Alicante successfully it will bear as much forcing as a Muscat of Alexandria. I have one Alicante planted in the first vinery, and this Vine is always more satisfactory than any of the same kind in a late house. The Grapes on this Vine are always left hanging until we want to prune the Vines, we then place them in bottles. Usually these Grapes are always in good condition after the same kind grown in a late house have been used. This is a convincing proof that late-keeping Grapes are better with a little forcing, and, as my late house contains such a mixed multitude, I usually assist them with a little fire heat.

I may state that the quality of the Alicante grown in an early vinery have always been superior to those grown in a late house.—G. R. Allis.

A REMINDER—COLEWORTS.

On or about the 30th of May I have for a number of years made it a practice to sow Early York Cabbage and the Dwarf Green Colewort. But what a simple subject that is to write about. True, it is simple, but then it is, like many other simple matters, very useful. It often requires the withdrawal of a simplicity of life to render its value appreciable. When we have anything in abundance its value is apt to be underestimated, but take it away for a season and the blank created is every day pressing its unwelcome presence on our notice. I was for one season without these simple necessities. I omitted to sow the seed, and my neighbours, like a great many neighbours of other people, had not recognised the value of the crop, and I could not obtain a supply of plants. I think as long as I am a gardener I shall not again forget to sow the seed, as my well-remembered blank is always a reminder of the importance of doing so somewhere near the time stated.

I felt the loss in more ways than one. My employer and his family missed the usual autumn supply of delicious vegetables, and for which no substitute was admitted to be satisfactory, and the winter greens had to be commenced, and a great portion of them consumed a month before the usual time, and a spring scarcity of vegetables followed the autumn disappointment, and all from the omission of the simple subject of this reminder. A neglect of what may appear trivial at the time may thus result in disappointment of no small magnitude, and be a source of discomfort, if nothing more, several months afterwards, and when too late to rectify the mistake.

Plants from this sowing not only give valuable cuttings in the autumn, but they are ready for planting in ground made vacant by the removal of early Peas, Potatoes, &c. Such ground seldom needs to be dug, but the plants are simply dibbed-in 15 inches apart, and the autumn rains may be depended on to give them support and make their produce sweet. They are used, and the ground again ready for winter digging and spring crops; also the winter greens proper are really preserved and prolonged for winter and spring use, which is a matter of no small importance where, as is often the case, ground is scarce and household wants are not easy to meet and satisfy.—A Kitchen Gardener.

THE GARDENERS' LESSON.

Two gardeners had their crops of Peas killed by the frost. One of them was very impatient under the loss, and fretted about it very much. The other went patiently to work at once to plant a new crop. After awhile the impatient fretting man went to his neighbour. To his surprise he found another crop of Peas growing finely. He wondered how this could be.

"These are what I sowed while you were fretting," said his neighbour.

"But don't you ever fret?" he asked.

"Yes, I do; but I put it off till I have repaired the mischief that has been done."

"Why, then you have no need to fret at all."

"True," said his friend, "and that's the reason I put it off."

NOTES on VILLA and SUBURBAN GARDENING.

Arranging and Planting Bedding Plants.—How pleasant it is to many an amateur, as well as the gardener, when the time has arrived for it to be considered safe to trust his stock of plants out in the beds. The anxiety brought about by having to nurse a stock of plants for so long under cover, and the amount of labour attached to them while so situated, turns into a sense of relief at the thought of being able once more to have them put into their proper places. Let us see if we can suggest a few simple arrangements for those who are not initiated.

Without entering into particularities, which would not be profitable, I presume there will be two main objects looked for or aimed at—that is, arrangement to be seen close at hand, or more distinct and contrasting to be seen from a distance. This last mode is found most popular in the amateur's garden, because as a rule the beds are small and borders narrow, and the colours to be arranged are but few. It is, however, always well to make

as much variation as possible, because variety, even in a small place, has a charm of its own.

A few simple modes of arrangement may here be noted; for instance, a bed of any shape having yellow Calceolaria for a centre surrounded with Scarlet Geranium Tom Thumb, and edged with Cineraria maritima or Cerastium, would look well. As another example take the Scarlet Geranium for a centre, and put the Calceolaria next, and edge the whole with Purple King Verbena or Lobelia speciosa. In either of the above, if Calceolarias are not grown, the yellow Tagetes will answer well. Another arrangement is to plant Amaranthus melancholicus, Coleus Verschaffelti or Perilla for a centre, surrounding these with Geranium Christine (pink), with an edging of Golden Pyrethrum, and there will not be much wrong. Among Silver-variegated Geraniums we may take Bijou or Flower of Spring as a type; place either of these in the centre of a bed surrounded by a band of any dark-foliage plant, such as Perilla or Beet, and then edged with Golden Chain. The above are all contrasting colours, and if the beds are large enough so as to admit of a good quantity of each being planted they will be particularly gay. But it may be that there is not space for these colours, then two must be used, taking care that the bed is properly divided for each colour to be shown off to advantage. The centre colour ought to occupy fully two-thirds of the bed; arranged thus they would look well. Scarlet Geranium, such as Cybister or Stella, edged with Calceolaria or Golden Chain; Coleus Verschaffelti edged with Cineraria maritima; or make Centaurea candidissima a centre, and edge with Mrs. Pollock Geranium; or take either of the last-named and plant in the centre, and they will be pleasing with an edging of blue Lobelia. Again, I admire a bed planted with Silver-leaved Geranium Manglesii and edged with Verbena pulchellum, or yellow Calceolaria edged with Purple King Verbena or Viola cornuta.

Now, if we come to a more harmonious arrangement we may place a pink in the centre, such as Christine, and edge with scarlet; or a pale yellow in the centre, such as Calceolaria angustifolia, and edge with the deep yellow Gazania splendens; or a blue Lobelia edged with the light-flowered Lobelia Paxtoni. Such arrangements are very necessary at times in a design to bring out the principal features in an arrangement of a more complicated nature.

Speaking generally, the plainer the shape of the bed the easier it is to plant, and the better will its arrangement be seen. For my part, though I like strong contrasts which can be seen at once, I have also a special liking for soft combinations of colour. There seems to be in these something to study, and which the more one examines the more does their beauty come to light.

The amateur, who must at times be sorely puzzled to know what is best to grow in his small place, will find some consolation in knowing that there are now many plants used for bedding of a dwarf habit, such as Golden Pyrethrum, Golden Chickweed, Mesembryanthemums both variegated and green, Lavender Cotton, the golden and silver variegated Thyme, and several others which occupy but little space during winter, and some of which are comparatively hardy. I ought also to mention Sedum elegans and the Variegated Grass, Dactylis glomerata variegata.

Now, if an arrangement totally different from that named above be wanted, by the addition to the above list of Alternantheras spathulata and magnifica, the amateur may work out almost any design his taste may lead him to in what is called carpet bedding, and thereby add an extra charm to his place, giving also a kind of relief to the blaze of colour produced by the ordinary flowering plants. These few remarks are intended as a guide or starting point for the amateur's use, not by any means exhaustive of the general system of bedding.—THOMAS RECORD.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

KITCHEN GARDEN.

UNTIL last Thursday the weather had been warm by day, the thermometer ranging from 70° to 80° in the shade, and the nights were comparatively mild, so that all growing crops including the Potato have made much progress. In earthing-up rows of Potatoes the mould should not be drawn-up with the hoe from each side to form a ridge close to the stem of the plant, as this plan throws all the rainfall into the bottom of the trench. The proper way is to draw-up the mould to form a ridge on each side of the row, so that a shallow furrow may be formed where the Potato plants are growing.

Asparagus is now producing abundantly, the beds requiring to be cut-over every morning. It has been recommended by some to water the beds at this time, but unless the season has been exceptionably dry but little benefit would result from it, and if the weather should set in cold the water would do harm by chilling the ground, which would certainly check the growth. No amount of frost would be likely to injure the roots of Asparagus when dormant in winter, but the young succulent growth are easily injured; cold weather checks their growth, and spring frosts kill them to the ground. Water may generally be applied with advantage during the summer months when the plants are in full growth; according to the strength of the plant in summer so may the quantity of the next year's crop be calculated upon. Manure water may be applied with advantage. We have seen excellent heads produced from gardens near the seacoast, and where annual dressings of seaweeds could be applied to the beds. Salt has also been highly recommended as a manure.

We are thinning-out crops of Onions, Carrots, Parsnips, &c., and hoeing between the rows. Wherever opportunity offers ground is prepared for succession crops, and the ground is hoed wherever there is the least appearance of weeds. Now is the time to have the garden clean and in good order, as, if weeds are allowed to make any headway now, there is little chance of completely eradicating them during the season.

PINERIES.

The usual time to pot suckers is in August, from the plants that ripen their fruit through the summer months; but if a few strong suckers can be potted now into 6 and 7-inch pots, the pots plunged in a brisk bottom heat, and a minimum temperature of 70° kept up, the pots will soon become filled with roots, when they may be repotted into 10 and 11-inch pots. These they will fill with roots by the autumn, and the plants will be of a fruiting size by the end of October. After they have had a rest up to the first week in January they may be started, and will produce fruit in June and July, and plants of this age produce finer fruit and do not require nearly so much space as those kept through two winters. When their management is understood Pines are easily cultivated. The turfy part of medium clayey loam five parts, one part rotted stable manure, two pecks of charcoal broken into pieces from the size of a boy's marble to that of a pigeon's egg, and one peck of half-inch bones, will grow the plants well.

Use clean pots, well drained; over the drainage place some turfy loam from which the finer particles have been beaten and sifted. The compost must be rammed-in rather firmly with a wooden rammer. The same treatment is again necessary when repotting. When the plants are repotted it is an excellent opportunity to add fresh material to the bed and to turn it over, mixing the fresh tan well with the old.

PEACH HOUSES.

In the late house there is plenty of work now tying-down the shoots to the wires. Avoid by all means crowding the trees with too much young wood. It is the nature of Peach trees that are trained on the fan system to become bare of young wood about the centre of the trees. This may be remedied by judicious cutting-back, and also by training the young wood over the bare stems of the branches. The Peach trellis ought to be furnished with bearing wood equally distributed over the whole surface of the trellis. It is necessary to again draw attention to thoroughly syringing the trees night and morning. The house may generally be shut up about 5 P.M., and that is the best time to syringe. In dull cold weather it may be as well not to syringe at night, as mildew may attack the trees; if it does, dust the leaves affected with sulphur at once. When the trees are in full growth they require as much water as Vines.

Outside borders are not likely to suffer for want of water, but should the roots be inside water must now be freely applied, and dress the surface with rotted manure; this causes the rootlets to work up to the surface, where they receive the benefit of the dressing.

In the earliest house, where fruit is ripening, the work is now pleasant enough if the trees have been well managed. Leaves that are shading the fruit should be pushed aside or picked off to allow the sun to act upon it. Plenty of air ought to be admitted night and day, and if the roots had a liberal supply of water before leaving off syringing no more will be required until all the fruit is gathered. If red spider was left on the leaves at that time they will play sad havoc with the leaves before all the fruit can be removed, so that they may again be syringed.

PLANT STOVES AND ORCHID HOUSES.

It is necessary to warn cultivators of the insect pests that increase so rapidly at this season. Red spider is even more insidious in its attacks than the dreaded mealy bug, and many plants are seriously injured before the enemy is perceived. Dracænas and Palms must be watched for it, and sponged if necessary with soapy water. The Cocoa-nut Palm is a favourite haunt of red spider, but the broad leaves can be readily washed with a large sponge. But the plants ought also to stand in a position where they can be syringed daily. Occasionally sponging the foliage of Dracænas, especially such useful decorative sorts as D. terminalis and D. Cooperi, is adopted and recommended, as the leaves are more brilliant by the cleansing.

Attend to training the climbers trained to the roof. One of the most useful of stove climbers is the Clerodendron Balfourii; this is never attacked by insects, and at the present time it is a mass of bloom. Stephanotis floribunda is another excellent plant to train to the roof. The flowers are prized for all sorts

of decorative purposes. It will do well cultivated in large pots, but it is far better to plant it out in a well-drained border, as the dark green large glossy leaves will testify, and the flowers are as large again. Mealy bug is a very troublesome pest on this plant. As this plant is invaluable where quantities of cut flowers are required, it is worth while to spend some time in cleaning it; the bug must be destroyed by hunting them up and picking them off by hand, and by washing with a sponge and soapy water. We do not allow the growths to become crowded or intertwined with each other. As nearly all the climbing and many other plants are now in flower, and as it is very desirable to retain their freshness as long as possible, just sufficient artificial heat is kept up as will raise the night temperature to 65°, the atmosphere is a little drier and more ventilation is allowed by day, but as the south-west winds have prevailed this week it has been necessary to be cautious.

Ferns and foliage plants are frequently syringed with tepid water, taking care not to wet Gymnogrammas, as the gold and white powder being washed about quite spoils the fronds. Orchids in flower are removed to a cooler house, where the bloom lasts much longer than it does in the stove.

FLOWER GARDEN.

By the time this is in print nearly all the bedding plants will be out, the exceptions being the more tender plants, such as Alternantheras, Coleus, Iresine, &c. We always bed out early, seldom later than the second week in May, but the plants are strong and well inured to the weather. Our belief, and it receives confirmation annually, is that one good plant that has not been too closely crowded with others is worth six weakly specimens that require half the season before they become established. High winds have been a source of annoyance to us while planting, but in all other respects circumstances have been favourable.

Now is the time to attend to Violets. The best runners should be selected and planted in rich soil, the leaves should be washed in soapy water to destroy red spider. In our light gravelly soil this pest is very troublesome; in dry seasons the leaves on the old plants have been quite destroyed by midsummer. Lee's Victoria Regina, figured some time ago in this Journal, should be extensively grown. The flowers are very large, richly coloured, and highly scented.

It will now be time to plant out Dahlias. If the plants are still in cold frames the lights should be off night and day, unless there are signs of a frost. The permanent sticks should be placed to the plants as soon as they are planted. Of course the ground was prepared in the autumn by being deeply trenched and well manured; nevertheless a rich compost should be placed round the roots to start the plants into growth at once.

Hollyhocks—if the spikes are wanted about the last week in August or early in September—should now be ready to put out; indeed they might have been planted with advantage earlier in the month. In Scotland we used to plant about the last week in April or the first in May for the September shows, and the plants were propagated in the previous autumn. In the south plants propagated by root-grafting in spring make the best spikes. The ground for them requires to be prepared as for Dahlias, and the treatment in other respects is similar. Red spider destroys the leaves if it is not washed off by syringing.

We have finished potting the Auriculas, the plants are now rooting freely. No mistake will be made in potting any class of flowers if the operation is performed at the time the roots are active. Any plants with long stems were cut over at the surface of the ground, the head potted in a small pot and placed under a bell-glass; this prevents the leaves from flagging, as if this occurs the cutting or crown will not do well. Many offsets start from the headless stump and soon form strong cuttings. —J. Douglas.

TRADE CATALOGUES RECEIVED.

Mr. William Bull, King's Road, Chelsea.—*Retail List of New and Rare Plants.*

The New Plant and Bulb Company, Lion Walk, Colchester.—*List of Ferns and Orchids.*

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Crystal Palace Company.—Flower Show, May 29th; Rose Show, June 26th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.

Coventry.—May 31st. Mr. T. Wigston, 3, Portland Terrace, Lower Ford Street, Sec.

Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.

Burton-upon-Trent.—June 16th. Mr. Wm. Shave, Bond Street, Sec.

Jersey.—Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon.-Sec.

York.—June 16th, 17th, and 18th. Mr. Jno. Wilson, 13, New Street, York, Sec.

Glasgow.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.

Exeter (Rose Show).—June 18th. Mr. J. N. Gray, Queen Street Chambers, Hon.-Sec.

Fareham.—June 23rd. Mr. H Smith, Sec.

Stowmarket.—June 24th and 25th. Mr. S. Prentice, Hon.-Sec.

Reigate (Rose).—June 26th, 1875. Bushby Britten, Esq., Hon.-Sec.

Wisbeach.—June 30th. Mr. C. Parker, Hon.-Sec.

Maidstone.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon. Sec., Rose Club, Mill Street, Maidstone.

Norfolk and Norwich Horticultural Society.—Rose Show, June 30th. E. A. Field, Hon.-Sec.

Birmingham.—July 1st, 2nd, 3rd, and 5th. Mr. Quilter, Aston Park Sec.

Spalding.—July 1st and 2nd. Mr. G. F. Barrell, Hon.-Sec.

Brockham Rose Show.—July 3rd. Rev. Alan Cheales and Charles Mortimer, Esq., Hon.-Secs.

Southgate.—July 3rd. John Miles, Esq, Hon.-Sec., Southgate, N.

Durham and Northumberland.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.

Grantham.—July 7th and 8th. Schedules, &c., from Mr. Lyne, Bookseller.

Winterton.—July 7th and 8th. Mr. McCallum, Sec.

Frome (Rose).—July 8th. Mr. A. R. Baily, Hon.-Sec.

Kilsby.—July 8th. Sec., Mr. C. E. Bracebridge.

Nottingham.—Rose Show, &c., July 8th, 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.

Oxford (Roses).—July 9th. Mr. C. R. Ridley, Hon.-Sec.

Heworth.—July 14th. Mr. R. H. Feltoe, Heworth, York, Hon.-Sec.

Oundle.—July 14th. Mr. Alfred King, Sec.

Tonbridge.—July 14th. Mr. W. Blair, Free Press Office, Hon.-Sec.

Wimbledon.—July 15th and 16th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon.-Sec.

Darlington.—July 16th, at Southend. William Hodgson, Sec.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Books (*A New Subscriber*).—Our "Garden Manual" contains directions relative to all you mention. You can have it free by post if you enclose twenty postage stamps with your direction.

Summer-pinching Fruit Trees (*F. J.*).—Leave the trees until the end of June. Apple trees are now in full flower. It is best not to pinch any trees until the fruit is set. We have pinched a few Pear trees on the walls that have no fruit upon them.

Peach Leaves Partially Decayed (*Kingsbridge*).—The roots do not supply a sufficiency of sap to maintain growth. Water with weak liquid manure copiously, and put mulch over the surface at night, but removing it during sunny days. We cannot guess about holes in Vine leaves.

Peach Leaves Blistered (*An Old Subscriber and L.*).—The blistering is occasioned by exposure to very low temperatures, such as night frosts. Protection is the only prevention. Pick off all the blistered leaves, and take care that all the aphides on them are destroyed with them. The shoots should be thinned-out, so that the young growth may be laid-in thinly to mature for the next season's crop; the fruit should also be thinned, leaving a fruit to about every square foot of wall surface. If you wish a fruit to remain at the base of a shoot to be removed, pinch that shoot in preference to removing it altogether, and the few leaves left will nourish the fruit. Amateurs' Peach trees are frequently overcrowded by laying the young wood in too thickly.

Rose Aphides and Mildew.—In answer to "*D. J.*" the Rev. Mr. Radcliffe writes:—"I kill the first and last broods of aphides with finger and thumb, and then syringe. They first appear on the hot south walls. I immediately kill them. The first brood proceeds from eggs laid in September. The September aphides are oviparous, and the spring and summer broods are viviparous. I believe, if not interfered with, there are ten generations in a season. As regards mildew, I simply cut off the twig and burn it before the parasitic fungus has time to spread. I do the same with orange fungus. By destroying the egg-layers in September you will stop much spring and summer mischief. My chief remedy for insects is cold water and squeezing.—W. F. Radclyffe."

White Parsley.—"Your correspondent, 'Sigma,' is deceived respecting the 'white Parsley' used by chemists to flavour essences. He has probably seen it in the bottles, but it is only the ordinary Parsley used to colour, not to flavour essences. The chlorophyll, or green-colouring matter, of the Parsley, being extracted by the spirit, leaves the Parsley blanched. It is generally used for the mint essences.—A. Deck."

Echeverias and Sempervivums (*Miles*).—When planted in the beds they are better turned out of the pots, as they grow much more freely. There is no advantage in putting them out in the pots, unless the plants may be as large as is wished, and the planting with the pots acts as a check to growth, also the plants are more safely removed from the beds in the autumn than plants which are taken up and potted.

Peach Leaves Blistered (*Idem*).—Insects, probably aphis, are the cause of the leaves curling, or it may have arisen from the blistered state of the leaves occasioned by cold. The worst infected leaves we should remove, and with warmer weather the leaves will come all right. There is no remedy for blistering of the leaves but more efficient means of protection to the tender growths from frost or cold weather. For the aphis no remedy is so effectual as a thorough syringing with tobacco water, the juice diluted with six times the volume of water, and each gallon of the diluted liquid holding in solution 2 ozs. of soft soap.

PALMS FLOWERING IN THE OPEN AIR (*L. M.*).—We presume they are Chamærops Fortunei which is a fine plant for sheltered positions. We do not think they would be injured by flowering, which we should certainly allow, and should be glad if you would inform us the after-state of the plants and the result as to fruit. It is not common for this plant to flower outdoors in these islands.

COOLING'S MATCHLESS BROCCOLI (*J. W. K.*).—It headed with us this year at the middle of April, and is only just over. It is a desirable kind with close heads. Its usual season is the close of March or early in April.

HERBACEOUS PLANTS FOR FORCING (*M. A. P. B. L.*).—Dielytra spectabilis, Spiræa japonica, Lily of the Valley, Solomon's Seal, Helleborus niger and var. major. These and Pinks we recommend, but the two latter are not of much use for cutting. Other plants for forcing, and admirable for cutting, are shrubs, as follows:—Azalea ponticum vars., Deutzia gracilis, Kalmia latifolia, Lilacs Charles X. and Persian, Rhododendrons, Prunus sinensis flore-pleno, and Roses. The treatment of the whole has been from time to time given in our pages.

PLANTING ECHEVERIAS (*W. B.*).—In a soil such as yours the raised parts of the bed may, after the proper shape is given, the walls builded firmly, and the plants put in, be thinly coated with Roman cement mixed about half and half with soil, and a thin layer or coating of it laid on the raised parts just covering them, and whilst wet or soft sprinkle it with soil to prevent the cement being noticed. Or a bank may be built of road scrapings, soil, and cow dung, in equal parts made into a mortar.

SEMPERVIVUM SEEDING (*Idem*).—Keep it in the house in a light airy position and fertilise the flowers, not potting the plant, or at least not until the flowering is past and the pods of seed are well developed. This even we do not advise unless the plant is pot-bound.

BUDS MAGGOT-EATEN (*C. A. J.*).—We fear that white hellebore powder would not destroy the grubs, for they are within the buds of your Apple, Pear, and Rose trees. Every bud attacked should at once be picked off and destroyed to prevent the small moths being produced from the grubs, which would give birth to more grubs.

SHALLOTS *versus* POTATO ONIONS (*J. H.*).—Shallots have much smaller and more leaves than Potato Onions. The appearance of Potato Onions does not differ very materially from Portugal Onions.

ROSES FOR WEST WALL (*E. G. H.*).—As you say Teas will not do, the following Hybrid Perpetuals may answer:—Alfred Colomb, Baron de Bonstetten, Capitaine Lamure, Charles Turner, Climbing Victor Verdier, Duke of Edinburgh, Edward Morren, General Miloradovitsch, Glory of Waltham, Louis Van Houtte, Madame Canrobert, Madame Hippolyte Jamain, Madame Laurent, Paul Neron, Princess Beatrice, and Thomas Methven.

LILY OF THE VALLEY NOT FLOWERING (*Idem*).—They are too crowded and cannot perfect the crowns. The situation is also unfavourable. They do best in slight shade, as that of a north border, and should be planted in clumps of about six crowns each at 9 inches apart, in rows a foot asunder, and four rows in a bed, and one row left out. The soil should be rich and light, watering freely in dry weather during growth. The planting should be done in November. Thinned-out to clumps of about six crowns each and 9 inches apart the old plantation may remain, giving a top-dressing of rich compost.

SNOWDROP TREE (*F. A. B.*).—It is the Halesia tetraptera, and so named in honour of the venerable Stephen Hales. It is a native of South Carolina, where it flourishes by the sides of shaded rivulets.

PEA TRELLISES (*G. B.*).—We have never used those made by Mr. Burns, and advertised by him. We have used such trellises and found them preferable to pea-sticks in most respects.

WOODLICE IN GREENHOUSE (*C. L. W.*).—Place a little hay loosely round the sides of the structures they infest, and in the morning pour boiling water down the walls a little above the hay. This, of course, kills all it touches, and repeated several times will entirely destroy them, though they will in time reappear. When this method cannot be adopted on account of the boiling water being likely to injure the plants, your best plan will be to place a boiled potato wrapped lightly in a little hay in a small flower-pot, and put the pot on its side where the woodlice are troublesome. This trap should be examined every morning, and the woodlice secreted in the hay shaken into boiling water. A number of traps of this kind, put down every night and examined in the morning, will soon thin their numbers.

INSECTS ON CURRANT TREES (*H. W.*).—The caterpillars found on your Currant trees and Gooseberry bushes are the larvæ of a saw-fly, Nematus Ribesii. Hand-picking is the best remedy, but you may try syringing them with lime and soot water mixed with soft soapsuds; also you may burn weeds to windward of the trees. When the grubs fall to the ground it should be well battered flat with a spade to kill them. In the winter the earth under the trees should be removed to the depth of several inches so as to carry away the chrysalides.—I. O. W.

INSECTS (*C. J. H.*).—You ask for much information about the grub sent, but do not say where it was found or what it had attacked to enable us to answer you properly. It is the larvæ of the common daddy-longlegs. Water the ground with lime water and soapsuds or gas-tar water now, and employ children to catch the flies when they arrive at the winged state.—I. O. W.

POULTRY, BEE, AND PIGEON CHRONICLE.

EGGS AND EAST WIND.

MR. ROBSON reminded us in that part of our Journal devoted to horticulture of the many benefits we indirectly receive through the beneficial influence of the much-reviled east wind acting on the soil. It is a word in season, for if there is one saying more than another that I have become weary of this spring, it is that popular but miserable and fallacious old distich which every second person one meets thinks it proper to shout in one's face as an accompaniment to the usual remarks about the coldness of the season. If the gentle Elia had only been a denizen of the country instead of the town, I am sure that among his prattlings about popular fallacies he would have given us something in refutation of this crusty rheumatic old bachelor's proverb about the east wind. I am persuaded that if we could trace it to its source we should find it issuing from the querulous lips of some gouty old gentleman laid-up with a roll of flannel round his toe. Do you doubt it? Nay, I am sure that no gardener ever gave birth to such a libel. The gardeners' proverb is, "A bushel of March dust is worth a king's ransom." And how will you have the dust without the east wind? It might perchance have been jerked out by some disappointed poultry fancier, some ancient Briton or noble Roman done out of his early brood of fighting Game chickens, and in this case I can fully sympathise with him, for we poultry-keepers learnt early to regard the east wind with anything but friendly feelings; but no gardener would ever so sweepingly condemn that which enables him to lay a good foundation for all his hopes. No, no, let us speak the truth, which in this, as in so many cases, lies betwixt and between the two extremes.

The east wind is a good friend under a rough exterior. He does much useful work, but he does it in a very unpleasant way. He brings blessings to the multitude, but knocks on the head a select few. He romps with the strong and healthy, but the delicate find his horseplay rather too much for them and collapse. This is one of the instances in which an all-wise Creator has judged it better that the few should suffer for the benefit of the many. In my own case my heart is divided. As a zealous horticulturist I cling to the east wind as a faithful but rather overbearing friend; as a rabid poultry fancier I have a sort of idea that I could dispense with it altogether.

What in the world is it it does to the eggs? Can't somebody tell us? Is there no way (I speak as a poultry fancier) to defeat our insidious opponent? Why should he be permitted to addle all our prospects any longer? You have doubtless had it explained to you by knowing people that our enemy is so mischievous because he is so dry, and that as we cannot make the wind wet we must make our eggs wet. Did you find the water cure answer? I never did. Wet or dry my eggs will not hatch at certain times, and wet or dry at other times they will. You may put turf at the bottom of your nests, you may sprinkle your eggs, damp the breasts of your hens, and pour water round your sitting places, but if the east wind has had its way you will have no chickens. Why is it? Now I am afraid some will think me a heretic; but I will tell you the conclusion I have come to: that constant damping as an antidote against east wind is a fallacy—useless, and in some cases (that is in very cold weather) worse than useless. "What, you ignoramus!" says one, "don't you know that hens which steal their nests always bring out the best broods? and they sit their eggs on the damp ground." No, sir, I don't know it. I have lately heard of a hen which early this season stole her nest, and sat in the manner described, but she hatched no chickens at all. I have heard, too, of hens choosing hayloft and other dry places for their nests, and having good broods.

I admit that hens which go away and sit naturally generally succeed best; but the reason given for it is not the true one. In the first place, hens that have proper nesting places under shelter rarely forsake them until cold weather is past. I never knew one of mine steal a nest until the warm weather had set in. If they try it in frost and east wind their eggs hatch, not better, but worse even than those under cover, in spite of damp ground and other supposed advantages, but in May or June nearly every egg produces a chick. Well, so they would if you had put them under a hen in your sitting house. The cause of it is not the damp ground, but the favourable conditions under which the eggs were fertilised and laid.

My opinion is that the vitality of eggs is not much affected by the east wind after they are laid, or during incubation; but that the mischief occurs before, to the birds themselves, during the time they are laying the eggs. I have no doubt that the cocks are seriously influenced by cold weather, and as a consequence the eggs are not properly fertilised. Added to this, the hens themselves are chilled and checked, so that, though they often continue to lay, their eggs are of very little use for hatching.

On the other hand, if eggs are laid during mild genial weather no amount of east wind during incubation will seriously affect them. My best brood this year was hatched from eggs set upon during three weeks of incessant bitter cold wind, with severe frost nearly every day. These eggs were laid during the mild weather we had in January. The nest was in a dry sheltered place, and no water was used in any way. My hens laid freely during the frost and cold winds in February, and beautiful-looking eggs they were; but I remarked at the time, "I question whether many of these eggs will hatch," and so it came to pass, not more than two in a dozen proving fertile. Those that were laid by hens in the most sheltered run hatched best. The run most exposed to the wind, though the hens there were with a vigorous cockerel, and my other birds with old cocks, produced the fewest good eggs.

I should much like to hear when other breeders obtained their best results this season. Considering the very mild January I quite expect that the eggs laid during that month

produced the best hatches, and that those who managed to have plenty of January eggs obtained also plenty of very early chickens hatched during the month of February. I quite expect to hear also that the broods in March and beginning of April were unusually small and weak, for the latter half of February and most of March was bitterly cold, and few eggs laid at that time would be fertile.

Now, if what I have advanced be true, what is the remedy? Sprinkling and damping the eggs during hatching is all nonsense. If the weather is very cold it will only give the hen more trouble to keep up the necessary temperature, and do more harm than good. It is not the eggs, but the fowls themselves that must be looked after. Do not let them stand about in the wind waiting for their breakfasts. Shelter your runs towards the north and east as well as you can. Provide for the hens a few extra dainties. Spice them up a bit, for it is the only time that spice will do them good. Favour your cocks especially with a little animal food, and as long as they are out keep them occupied; for I really think it would be better to shut them up most of the day if the run is exposed, than to allow them to stand about on one leg in the cold. If you have any eggs take them out warm from the nest, and do not leave them about, for if the weather is very severe they may be frozen. —R. W. Beachey.

CHICKEN FROM DOUBLE-SHELLED EGG—BREEDING PURE.

We have just successfully hatched a Houdan chicken which was enclosed by two distinct shells one within the other.

I should be glad to learn whether it is necessary for pure breeding to keep the breeds separate, except, of course, at such seasons as the eggs are required for hatching. The analogy of pigs, horses, dogs, would lead one to expect that constant separation is necessary.—E. L.

[We have seen before that which you note. We have, however, seen it only once, and our great surprise was how the chicken made its way through two strong shells, for they were fully formed and of an average thickness. When once hatched it became an ordinary chicken. These things have doubtless happened before, but they were not noticed. We have now preserved in spirit two perfect chickens, the result of a double-yolked egg, which was broken that the condition of it might be ascertained. Each is attached to a yolk. Both yolks and chickens are thoroughly distinct and perfect. We can recollect when these eggs were looked at with dislike and few would eat them. Even cook looked askew at them and would rather not use them, and the poultry woman asked to get rid of the hen that laid them. "There was something about her she didn't like, and she never roosted like the other fowls." "If you noticed, she had a cute look that didn't ought to belong to a fowl." The only offence of the poor hen was, she was subject to twins.

We believe there is no analogy between fowls and the animals you mention. All the Gallinaceæ are subject to season after their first laying. In some, as in all Game, they cannot be made to deviate from their appointed time for breeding. Indeed the only difference of sex would seem to be in plumage except during a few weeks of the year. The same is true of Ducks and Geese, and of all birds in a state of nature. The only deviation is, if a Pheasant or Partridge loses its first eggs it lays a second nestful. The Pewit or Lapwing that lays the delicious eggs known as Plovers' eggs will, if the eggs be taken three times, lay a fourth, but after that the season is past and she lays no more. In both cases it is curious that the desire to perpetuate its species, and thus fulfil the purpose for which it is sent, would seem to enable a bird to become fruitful at will, because if the first eggs had been left the Pewit would have sat on them and hatched them. A hen Pheasant running wild will lay fifteen or sometimes seventeen eggs and then sit, but if the eggs are taken away she will lay twenty-five or thirty. This fecundity is only during the season, and that extends over twelve weeks at the outside; sex then seems to disappear till the next breeding season. It is not exactly the same with poultry, because pullets lay at a certain age, but after they become hens they lay only in their season, and that is after the severe weather is past. For these reasons we do not think it necessary to keep fowls separate during the winter months. We have had many running together for years. We separate them two months before we wish to put the eggs under hens, and have never been deceived. For these reasons we do not think them subject to the same rules as the quadrupeds you mention.]

THE PRESENT HATCHING SEASON.

Having seen several letters in "our Journal" relating to the present hatching season, I thought—having received fourteen sittings of eggs from various parts of the country, and having kept a tabulated record of the result—that my experience would perhaps be interesting to my fellow fanciers. Herewith I enclose the form of particulars. I may say that, with the exception of three sittings, these eggs were purchased from well-known exhibitors at a cost of from 10*s.* 6*d.* to 25*s.* per dozen exclusive of carriage. The hens were set side by side upon the earthen floor of a house exclusively devoted to sitting hens, and where the temperature ranged from 45° to 65°. They were all taken off the nests at the same time by myself, supplied with food, water, and dust bath, and returned after an interval of from ten to twenty minutes according to the weather. The usual sprinkling and water bath was attended to.

I may add that the only ailment that I have had among the chicks has been diarrhœa, and that only to a slight extent. I feed about every two hours from 6.30 A.M. to 8 P.M. with chopped egg, bread and milk, bread and beer, grits, oatmeal, barleymeal, buckwheat, barley, and boiled liver. They have grass and vegetables *ad lib.*—N., *Ventnor, Isle of Wight.*

[We regret not being able to afford space for the very full tabular report of the proceedings and results, but we will give an epitome of them. There were 178 eggs, and these were divided into fourteen sittings. The chickens hatched were seventy-six, and thirty-six were dead in the shells. The other eggs were either broken, clear, or addled. Distance travelled and packing seem to have no material influence. Thus, thirteen Hamburghs' eggs travelled 296 miles, and changed trains five times, yet produced eight chickens. The same result exactly occurred with Houdan eggs after travelling fifty miles and three changes. Whether packed in paper and hay, or in oat husks, or in wadding, nine packages out of the fourteen came with eggs unbroken.—Eds.]

BEDLINGTON SHOW OF POULTRY, &c.

The eleventh annual Show was held at this plucky colliery village on the 17th and 18th inst. The weather was very fine and warm, and the birds protected by two excellent marquees, which while being a perfect protection admitted the light in a perfect manner. There were some empty pens as might be expected, the birds arriving late; and in Pigeons almost one-half the birds were not in the pens, Mr. Van der Meersch's being among the lot.

Cochins were good, the cup for the first four classes going to an exceedingly rich pair of Buffs, and in the next class the section cup for five classes was awarded to a grand pen of *Spanish*, the second being also a grand pen. *Polish* were all noticed. First Silvers, and the rest Gold. The third and highly-commended pens had capital pullets, but poor cocks as compared with the winners. *Game* had six classes and had good entries. In single cocks were eighteen entries, almost every pen being good, the cup for Game being awarded to a Duckwing cock which was grand in every particular second was a Brown Red, good in style and colour but a little scant in tail. The best single hen was a Black Red, one of the best in fact that has been out of late; second was a Brown Red, and third a Duckwing. Black and other Reds were, first a hard and close-feathered pair of Brown Reds; second a pair of Champion Black Reds, not, however, in the highest order; and third good Brown Reds. Duckwings were not a good class, only the first-prize pen being of any note. *Hamburghs* had four classes, and these were very even throughout, the cup going to a neat pen of Gold-spangles. Poultry, any other, were, first Black Hamburghs, and second and third Houdans. *Bantams* were a smart section, the birds being well shown and mostly in capital feather. Single cocks were good, except that some of the best were a little heavy in tail. Hens a fair lot, the first winner very good, second a Brown Red. In Red Game Bantams, pairs, the first, the cup was awarded to Black Reds, good in style and general quality, but the hen a little white in ear, but they seemed to be shown in a most natural state; second and third of that colour were very good. In the next class Duckwings were first, and needed only soap and water to have ensured the cup; second were very smart Piles, as also the third. The latter, however, were a little too light on the wing ends. Black Bantams were very good, but some of them a little overshown. Only the first in Aylesbury *Ducks* were good, but the Rouens were a good class; and in the Variety class first were Pintails and second Widgeons.

The cottagers' classes were a surprise to us, class after class proving good, the Cochins being about the best of such classes we have ever seen in the north of England, many birds proving quite perfect, and in almost the same degree these remarks will apply to the Bantams.

Pigeons, as before stated, were pretty numerous, and also as a rule well placed, the cup going to a capital Carrier cock. Second was a Dun cock, and pen 211 being very good but rough and not well shown. The first Short-face was an Almond cock, good in head but a little muddy in colour; second was a good Black Mottle. In Long-faces first and second were Black Mottles, both good; although we were surprised pen 215, an Almond, did not receive one prize—but perhaps this was right. Pouters were a grand class; the first was a Blue and second a White cock, many other birds being justly noticed. Two Black-pied

hens were really good, pens 239 and 242. Dragoons were not to our mind, being mostly of the broad-shaped-headed kind, and few were noticed. Nuns were good, but many pens were empty. In Owls first was a foreign White, and second a Silver English. Fantails poor, and Magpies only moderate, if we except the first-prize Black. In Antwerps Mr. Yardley's well-known Short-faced Silver was first, and a good Silver Medium second. The Selling class was poor.

CAGE BIRDS were but few in number but a very select lot, the winner in each class being particularly good of its kind, the first in Dutch being a grand showy specimen. Mules showed the great care exercised in their breeding, some almost clear birds and many even-marked birds turning up. The Goldfinch class was particularly good, in fact it is seldom we find any class to surpass them.

In consequence of the wording of the schedule in the class for singing birds it was ruled by a knot of the Committee that Canaries were excluded, and the consequence was that birds not strictly known as song birds were awarded the prizes—viz., first a Bullfinch and second a Snow Bunting; and we think it would be much better in future if this class be expunged and one for British birds be substituted, then exhibitors will not be misled in making their entries.

RABBITS were but poor if we except the first-prize Tortoise-shell Lop buck, which was a very good specimen.

DORKINGS.—1, J. Carr, Whitby. 2, W. Swann, West Sleekburn.

COCHINS.—*Buff or Cinnamon.*—Cup, G. H. Procter, Durham. 2, W. Swann. *hc*, E. Winwood, Worcester. *c*, Urwin & Ibeston, Whitby. *Any other variety.*—1, G. H. Procter.

BRAHMA POOTRAS.—1, W. Swan. 2, C. Cruddace, Seaton Delaval.

SPANISH.—Cup and 1, H. Beldon, Goitstock. 2, J. Oliver, Burradon Colliery. 3, R. Simm, Bedlington.

POLISH.—1 and 2, H. Beldon. 3, R. Parsons. *vhc*, H. A. Clark, Aspatria, Carlisle.

BARNDOOR FOWLS.—*Crossbred*—1, G. Robinson, North Frodingham. 2, J. W. Lawson. 3, J. Ford, High Ewart Hill. *c*, J. Merriman, Bedlington; J. Short, Wooler.

GAME.—*Any variety.*—*Cock.*—Cup and 1, J. Young, Bebside Colliery. 2, J. W. Brockbank, Kirkseaton. 3, E. Aykroyd, Eccleshill, Leeds. *vhc*, W. Younghusband, Darlington; Miss M. J. Nelson, Cockshaw, Hexham. *hc*, J. Howey, Longhirst Colliery; T. E. Satterthwaite, Castle Howard, York; G. Latimer, Washington, Durham; G. Bennett, Dinnington Colliery. *c*, J. Fletcher, Stoneclough, Manchester; W. Hetherington, Bedlington. *Hen.*—1, J. Fletcher. 2, E. Winwood. 3, T. Young, Bebside Colliery. *hc*, E. Aykroyd; T. Middlemiss, Seaton Delaval; W. Liudsey, Morpeth.

GAME.—*Black-breasted and other Reds.*—1, W. Younghusband. 2, T. Middlemiss. *vhc*, J. Young. *hc*, J. Brough, Carlisle. *c*, Davison & Pattison, Bebside Colliery. *Duckwings and other Greys.*—1, E. Aykroyd. 2, J. Gibson, Stanhope, Durham. 3, Messrs. Staveley, Tibthorpe, Driffield. *hc*, E. Winwood. *Any other variety.*—1, Douglas & Golightly, New Hartley (Lemon Piles). 2, 3, and *hc*, W. Drysdale, Longhirst Colliery (Lemon Piles).

HAMBURGHS.—*Golden-spangled.*—Cup and 1, H. Beldon. 2, T. Stewart, Dudley Colliery. 3, G. Stalker, West Sleekburn. *Silver-spangled.*—1, H. Beldon. 2, W. Johnson, Cowpen Colliery. 3, G. Stalker.

HAMBURGHS.—*Golden pencilled.*—1, W. Linton, Sloethorn Bank, Selkirk. 2, H. Beldon. 3, J. G. Walker, Hendon, Sunderland. *hc*, Miss Elliott, Whalton Rectory; T. Marshall, Mitford Vicarage, Morpeth. *Silver-pencilled.*—1, H. Beldon. 2, Davison & Pattison.

GUINEA FOWLS.—1, Mrs. Robson, Duddo Hill, Stannington. 2, C. Young, Driffield, York.

ANY OTHER VARIETY EXCEPT BANTAMS.—1, H. Beldon. 2 and *c*, Rev. J. G. Milner, Hamsterley, Bishop Auckland (Houdans). 3, H. A. Clark, Aspatria, Carlisle.

BANTAMS.—*Any variety.*—*Cock.*—1, G. Bell, North Seaton Colliery. 2, T. Gothard, Millfield, Sunderland. 3, Miss M. J. Nelson, Cockshaw, Hexham. *hc*, G. Dowie, West Sleekburn, Bedlington; J. Mayo, Gloucester; J. Short, Bedlington. *Hen*—1, Miss M. J. Nelson. 2, W. Atkinson. 3, G. Dowie.

BANTAMS.—*Any other variety except Game.*—1, H. Beldon. 2 and *hc*, R. H. Ashton, Mottram, Manchester (Black Bantams). 3, W. Atkinson. *c*, J. Durning, Cambois (Black Rose-comb).

GAME BANTAMS.—*Black-breasted and other Reds.*—Cup and 1, E. Rutherford. 2, Miss M. J. Nelson. 3, J. R. Fletcher. *hc*, E. Walker, West Sleekburn. *Any other variety*—1, J. R. Fletcher (Black Red). 2, T. Reaveley, Bedlington Station. 3, Miss M. J. Nelson. *hc*, E. Walker. *c*, Miss M. J. Nelson; T. Birkley, West Sleekburn.

DUCKS.—*Aylesbury.*—1, W. Stonehouse, Whitby. 2, J. Swann, Bedlington. *Rouen.*—Cup, 1, and *c*, W. Swann. 2, J. W. Brockbank, Kirksanton. 3 and *hc*, Miss M. J. Nelson. *Any other variety.*—1 and 2, Rev. J. G. Milner, Hamsterley, Bishop Auckland (Pintail and Widgeons). 3, T. Routledge, Sleekburn Old Tilery (Muscovy).

SELLING CLASS.—*Cock or Drake—Price not to exceed* £1 10s.—1, J. W. Brockbank. 2, E. Winwood. 3, J. Darsing (Black Red). *hc*, H. Mulley (Duckwing); J. G. Walker. *c*, T. E. Satterthwaite (Game); W. Linton, Selkirk.

SELLING CLASS.—*Hen or Duck.—Price not to exceed* £1.—1, R. H. Ashton (Gold-spangled). 2, T. Young. 3 and *hc*, W. Linton.

COTTAGERS' CLASSES.

GAME.—*Cock.*—1, J. Young. 2, G. Taylor. 3, J. Stark. *Hen.*—1, G. Taylor. 2, J. Young.

HAMBURGHS.—*Cock.*—1 and 2, G. Stalker. 3, D. Cheyne. *hc*, J. Morton, Choppington; G. Johnson, Choppington Colliery. *Hen.*—1, D. Cheyne. 2, J. Morton, Choppington, Morpeth. 3, J. Wilson, Shankhouse Colliery. *hc*, G. Stalker; G. Johnson. *c*, R. Blackburn, New Choppington, Morpeth.

ANY OTHER VARIETY EXCEPT BANTAMS.—*Cock.*—1 and *vhc*, J. Hine, Bedlington (Cochin China Buff). 2, J. Wilson, Shankhouse Colliery (Cochin). 3, J. Nesham, West Sleekburn (Brahma Pootra). *hc*, J. Dodds, Nedderton (Cochin). *Hen.*—1, R. Hine, Bedlington (Cochin Buff). 2, R. Wailes, Bedlington (Cochin). 3, A. Common, Choppington Colliery (Cochin).

BANTAMS.—*Cock.*—1, J. Black, Barrington. 2, —Birkley, West Sleekburn. 3, G. Bell, North Seaton Colliery. *vhc*, J. Douglass, Bedlington Station. *hc*, G. Dowie, West Sleekburn, Bedlington. *Hen.*—1, G. Taylor. 2, J. Douglass. 3, G. Bell. *hc*, T. Reaveley. *c*, G. Black, Barrington Colliery.

PIGEONS.

CARRIERS.—*Cock or Hen.*—Cup, 1, and 2, Ridley & Dye, Hexham. *hc*, Ridley and Dye; R. H. Blacklock, Sunderland; E. Beckwith, Sunderland; H. Simpson, Shankhouse.

TUMBLERS.—*Short-faced.*—*Cock or Hen.*—1, 2, and *vhc*, E. Beckwith. *hc*, W. Brydone, Langton Mains, Dunse; H. Simpson; H. Yardley, Birmingham. *Any other variety.*—*Cock or Hen.*—1, and 2, Ridley & Dye. *vhc*, Ridley & Dye; J. Murray, Ouseburn, Newcastle. *hc*, E. Beckwith.

POUTERS.—*Cock or Hen.*—1 and 2, Ridley & Dye. *vhc*, Ridley & Dye (2); R. H. Blacklock. *hc*, R. H. Blacklock (2); E. Beckwith; H. Simpson; H. Beldon; H. Yardley.

DRAGOONS.—*Cock or Hen.*—1 and 2, W. Smith, Walton. *vhc*, R. Woods Mansfield. *hc*, R. Woods; E. Beckwith.

NUNS.—*Cock or Hen.*—1, J. Young, Bishop Aockland. 2, W. Brydone.

OWLS.—*Cock or Hen.*—1, E. Beckwith. 2, Ridley & Dye. *vhc*, W. Brydone. *hc*, R. Hall, Newcastle; E. Beckwith; J. Young.

TURBITS.—*Cock or Hen.*—1 and *hc*, Ridley & Dye. 2, J. Young.

BARBS.—*Cock or Hen.*—1 and *vhc*, E. Beckwith. 2, Ridley & Dye. *hc*, P. Wilson, Pegswood, Morpeth; W. Brydone; E. Beckwith; J. Young; H. Yardley.

JACOBINS.—*Cock or Hen.*—1, W. Brydone. 2, E. Beckwith. *hc*, E. Beckwith; J. Young; H. Simpson.

FANTAILS.—*Cock or Hen.*—1, P. Wilson. 2, E. Beckwith. *hc*, H. Simpson.

MAGPIES.—*Cock or Hen.*—1, M. Ord, Sedgefield, Durham. 2, E. Beckwith. *hc*, H. Beldon.

ANTWERPS.—*Cock or Hen.*—1, H. Yardley. 2, J. Lee, Nedderton Colliery.

ANY OTHER VARIETY.—*Cock or Hen.*—1, Ridley & Dye. 2, M. Ord (Turbiteen). *vhc*, H. Beldon. *hc*, E. Beckwith (2); M. Ord; H. Yardley.

SELLING CLASS.—*Pair.*—1, J. Murray, Ouseburn, Newcastle. 2, J. Young. *hc*, P. Wilson (Magpies).

CAGE BIRDS.

BELGIANS.—*Cock or Hen.*—1, J. Robson, Bedlington. 2, W. Kitchen, Morpeth.

NORWICH.—*Cock or Hen*—1, J. Robson. 2, W. & C. Burniston, Middlesborough.

CRESTED.—*Yellow or Yellow-marked.*—*Cock or Hen.*—1, R. Joblin & Son, High Heworth Colliery. 2, J. Leach, Bedlington. *Buff or Buff-marked.*—*Cock or Hen.*—1, E. & J. Baxter, Newcastle. 2, Miss J. A. Swan, North Shields.

GLASGOW DONS.—*Cock or Hen.*—1, J. Murray, Ouseburn, Newcastle.

LIZARDS.—*Cock or Hen.*—1, W. & C. Burniston.

GOLDFINCH MULES.—*Yellow-marked.*—*Cock or Hen.*—1, J. Robson. *Buff-marked.*—*Cock or Hen.*—1, J. Purdy, Ashington Colliery. 2, W. & C. Burniston. *hc*, J. Robson.

MULES.—*Any other variety.*—*Cock or Hen.*—1 and *vhc*, J. Spence, South Shields (Linnet Mule). 2, W. & C. Burniston. *hc*, E. & J. Baxter.

COMMON CANARY.—1, J. Robson. 2, W. Kitchen, Morpeth.

GOLDFINCH.—*Cock or Hen*—1, J. Smith, New Deleval. 2, J. Robson. 3, R. Jobling & Son. *hc*, W. & C. Burniston; Miss D. Swan, North Shields.

LINNETS.—*Brown*—*Cock or Hen.*—1, Misses E. & J. Baxter, Newcastle.

SINGING BIRD.—*Any other variety.*—*Cock or Hen.*—1, Mrs. Robson. 2, W. and C. Burniston (Snow Bunting). *hc*, E. & J. Baxter.

ANY OTHER VARIETY EXCEPT SINGING BIRDS.—*Cock or Hen.*—1, E. Mackenzie, Waterloo, Blyth (Parrot). 2, W. Maxwell, Gateshead (Cockatoe).

SELLING CLASS.—*Cock or Hen.*—1 and *hc*, E. & J. Baxter. 2, Mrs. Robson. *vhc*, J. Murray, Ouseburn, Newcastle.

RABBITS.

LONG-EARED—1, J. Murray. 2, T. Thorpe, Monkwearmouth. *hc*, J. Stoker, Bedlington Colliery; E. Newbegin.

ANY OTHER VARIETY.—1, E. J. Carr, Newbiggin-by-the-Sea (Himalayan). 2, E. McKay, Darlington (Angora). *hc*, P. J. Webster, Sunderland (Himalayan).

JUDGES.—*Poultry, Rabbits, and Cage Birds:* E. Hatton, Pudsey. *Pigeons:* T. J. Charlton, Bradford.

SUNDERLAND POULTRY SHOW.

WITH so many enthusiastic fanciers it has long been matter of surprise to us that an annual open show has not been held at this place, but we think this first attempt has so far succeeded as to ensure its annual occurrence, for the first day being exceeding fine the gate money was something handsome, although the second day proved somewhat showery. It is, however, to be regretted that some other time was not chosen, for two shows in the north of England held at the same time cannot be expected to do as well as if held separately, and Bedlington having established a claim to the Whitsuntide holiday by eleven shows ought to have been allowed that time unmolested. The entries were 199, those of Bedlington being 204. The show field was a little too far from the principal parts of the town, but an excellent marquee was provided, and Fothergill's pens were used with good effect.

Dorkings were first, and on our entering we were surprised to find Mr. Widdas's grand pen left out, but we found they were too late for competition. The winners only were good. The winning pens of *Spanish* were very good, and we were particularly struck with the quality of the cock in the second-prize pen. *Cochins* good in Buffs, Mr. Proctor winning, as also in the next class with a neat pen of White; Partridge winning second. Dark *Brahmas* were a fair class, more numerous than some of the others. In *Game* (Reds) the first were Mr. Mason's well-known old, very old, pen of Black Reds. Brown Reds were second, but the class was not good. Pen 50, Brown Reds, were, however, very good, though young. In Game, Any other, Duckwings won, both good, the cock in the first especially so. Pen 60, Piles, were good but out of feather. In single cocks we are sorry we could not agree with the first award; this was a Black Red of enormous size, in our opinion quite 9 lbs. weight, and very coarse. Such a bird should not be allowed a place. The second was a Brown Red, well placed, but a little out of condition. Pen 63 (Morgan) we should have placed first, this bird being faultless, and by far the best Game fowl in the Show. Hens were very poor. In *Hamburghs*, as in some other classes, many pens were empty, but the winners were very good throughout, the cup going to Gold-spangles. *Malays* were a good class, and may be taken as a guarantee of what may be expected if classes were provided generally for this handsome variety of bird. In the Variety class first were Silver Polands and second Black Hamburghs. *Bantams* were the section of the Show, and being the figurehead of the fancy in this locality we were not surprised to find so good a lot; but before proceeding to criticise the awards in this section it is but fair to state that in some parts of the tent the rain had penetrated, and nothing tends so much to alter and improve the style of a Game Bantam, so that seen under other circumstances our opinions might have been quite different. In Black or Brown Reds we liked Mr. Hall's highly commended pen 118 in preference to any other, although the

first were a good pen, as also the second. The class was of rare quality, and many more notices might well have been made. Duckwings won both prizes, although there were some most perfect Piles. In the first-prize pen the cock was a gem, but the hen a wretch indeed; more, however, for want of bloom than anything else. Second was a fair pen. To both of the above we preferred Mr. Nelson's Duckwings and Messrs. Bellingham & Gill's Piles. Black Bantams were good and in fine order. Bantam cocks were the best class in the Show, almost all being worthy of notice, and we could not envy the Judge's task here. Black Reds were the winners. Hens were poor, and the *Ducks* of both kinds of moderate quality.

Dorkings.—1, D. Gellatly, Meigle. 2, Henderson & Wardle, Bornopfield, Durham. *c*, J. White, Northallerton.

Spanish.—1, H. Beldon, Goitstock, Bingley. 2, R. Shield, Swalwell. *hc*, W. McIntyre, Ochilhee.

Cochins.—*Cinnamon or Buff.*—Cup, 1, and 2, G. H. Proctor, Durham. *hc*, C. Turner, Norton, Stockton; J. Hine, Kendal. *Any other colour.*—1, G. H. Proctor. 2, W. Newbegin, Newcastle.

Brahmas.—*Dark.*—1, T. F. Ansdell, St. Helen's. 2, W. Whiteley, Sheffield. *hc*, C. Venables, Sheraton, Castle Eden; Lady A. B. Peirse, Bedale Hall, Bedale; T. F. Ansdell. *Light.*—1, W. Whiteley. 2, S. H. Lloyd, Maghull.

Game.—*Black or Brown Reds.*—Cup and 1, J. Mason, St. John's, Worcester. 2, J. Robson, Bishop Auckland. *vhc*, Henderson & Wardle. *hc*, Miss M. J. Nelson, Cockshaw, Hexham; J. Dixon, Monkwearmouth. *Any other variety.*—1, J. A. & H. H. Staveley, Driffield. 2, J. Mason. *hc*, J. Robson; T. Young, Bebside, Morpeth; E. Winwood, Worcester; R. Walker, Gomersal, Leeds.

Game.—*Any variety.—Cock.*—1, J. Harrell, Bishopwearmouth. 2, A. Sugden, Cleckheaton. *hc*, C. E. Morgan, Bishop Auckland; Miss M. J. Nelson. *Hen.*—1, C. E. Morgan. 2, T. Young.

Hamburghs.—*Golden-spangled.*—Cup and 1, H. Beldon. 2, T. P. Carver, Langthorpe, Boroughbridge. *Silver-spangled.*—1, H. Beldon. 2, G. Alderson, West Hartlepool.

Hamburghs.—*Golden-pencilled.*—1, T. P. Carver. 2, H. Beldon. *c*, J. N. Lawson, Ryhope. *Silver-pencilled.*—1, H. Beldon. 2, J. T. Gilbert, Bishopwearmouth. *hc*, Dr. Davidson, Bishopwearmouth.

Malays.—1, Rev. A. G. Brooke, Shrawardine Rectory, Shrewsbury. 2, R. Hawkins, Seaham. *hc*, G. Burnell, Rugeby.

Any other Variety.—1, H. Beldon. 2, H. A. Clark, Aspatria. *vhc*, G. W. Grainger, Bishopwearmouth; J. T. Proud, Bishop Auckland. *hc*, W. Coulthard, Southwick; T. P. Carver; C. Venables; Bridgwater & Yoxall, West Bromwich; A. Buglass, Durham.

Game Bantams.—*Black or Brown Red.*—Cup and 1, G. Hall. 2, T. Stansfield, Millfield. *hc*, G. Hall, Kendal; F. Holt; Miss M. J. Nelson; J. Ferry, Cowpen, Morpeth. *Any other colour.*—1, D. Hunter, Sunderland. 2, T. Mallen, Sunderland. *hc*, Miss M. J. Nelson; Bellingham & Gill, Burnley; T. Stansfield.

Bantams.—*Black and White Rosecombs.*—1, J. Mayo, Gloucester. 2, H. Beldon. *hc*, Milner & Beanland, Keighley; Miss M. B. Yeoll, Bishopwearmouth; R. H. Ashton, Manchester. *Any other variety.*—1, T. B. Carver. 2, R. A. Boissier, Peasharst.

Bantams.—*Any variety.—Cock.*—Cup and 1, Miss M. J. Nelson. 2, A. Sugden. *hc*, W. Newbegin; R. Brownlie, Townsend; H. H. Thompson, Bishopwearmouth (2); D. Hunter, Sunderland. *c*, G. Hall. *Hen.*—1, T. Clark, Sunderland. 2, T. Stansfield. *hc*, G. Alderson; Miss M. J. Nelson; J. Barlow, Monkwearmouth; G. Hall; A. Sugden.

Ducks.—*Aylesbury.*—1, R. Roddom, Hetton-le-Hole. 2, F. E. Gibson, Middleton-in-Teesdale. *Rouen.*—1, W. H. Young, Driffield. 2, Miss M. J. Nelson. *Any other variety.*—1 and 2, J. Johnson, Sunderland.

Selling Class.—1, J. Hine. 2, J. Robson. *hc*, W. Allon; J. N. Lawson.

The Judge was James Dixon, Esq., North Park, Bradford.

"A SWARM OF BEES IN MAY IS ——."

While hay is being sold at £8 per ton the most advanced and pronounced apiarians dare not finish the above sentence or make the assertion; still I, and many others, venture to assert that bee-keeping is both an easy and profitable occupation. To both rich and poor it is, or may be, a self-rewarding recreation. I speak from experience in saying that it is a pleasing and upholding thing for a son of toil to know that while work and weather combine to cover his forehead with perspiration, his industrious bees are working harder than he and gathering together the worth of a week's wages in one day.

Aforetime I have had great pleasure in writing for the encouragement and benefit of working men; and for their encouragement I will here state that from 1870 to 1874 my profits from bee-keeping, after deducting all expenses, amount to £220. The first three years of this period were considered unfavourable for bees. 1873 was the most unfavourable year for them I ever experienced; and last year, though unfavourable till the end of May, became favourable in June, and continued so till the end of the season. These facts and figures are named here to help young apiarians to look hopefully to the future.

Bee-keeping is an easy and profitable pastime. Where shall we find anything living that requires less attention than bees? They clean and furnish their own houses, and in ordinary seasons store up more honey than they need—honey enough for the market or their owner's use. A few hives in a garden indicate recreation, not toil—profit, not expense. What less costly to keep than bees? With sugar at 3*d.* per lb. (some is sold in Manchester at 2½*d.* per lb. good enough for bees) bee-keeping is not a losing game even in unfavourable seasons. The expense of feeding during unpropitious weather is as nothing now compared to what it was fifty years ago, when sugar cost from 9*d.* to 1*s.* a-pound. Four or five shillings' worth of sugar given as syrup to a swarm will enable it to fill, or nearly fill, its hive with combs and store up food enough for the winter months, thus making a stock hive worth 30*s.*

Once in possession bees may be managed on any system their owner likes. On the multiplying principle one will become three, and ten will increase to thirty in one season. Swarms from small hives under good management or kindly treatment will fill larger hives. In this way stocks increase not only in number but in value. With good stocks of bees and a little knowledge of them progress and profit will be made. To working men bee-keeping is more than a hobby; it is an aid to breadwinning in his family—a perennial source of income.

Bees may be managed on the restrictive or non-swarming system. An eagle may be chained to a block of wood or stone, and a vine may be grown in a pot; but all this is restrictive and unnatural. Bees have powers of multiplication, expansion, and growth that may be restricted to narrow limits, and there kept in a state of dwarf-hood. But on any system of management there is but little work or attention required. Where bees are farmed to the utmost extent, and taken from one locality to another, there is an expense of both time and money.

"Where shall we find a market for our honey?" is a cry that comes frequently to us from the country, and from bee-keepers in all positions of society. This cry indicates skill and tact in apiculture, and it is very pleasing to us to know that hundreds of bee-keepers are now pocketing the proceeds of very successful management. In country places there is a difficulty in finding a market for all the honey gathered in a good season. But so far as I know, all country bee-keepers do in time find a market and demand for their produce. I am frequently hailed by buyers in Scotland, but last year I was hailed by a dealer in Chelsea market, London, who wanted all I had. Fortunately I did not send any to him, afterwards learning that he is one of a "long firm," who obtained honey from some bee-keepers in a neighbouring county without making payment.—A. Pettigrew.

CEMENT FOR GUIDE COMBS.

When using bar-frame hives or supers it becomes a necessity in order to secure good straight combs to furnish some guide for the bees to start their foundations on—a thin strip of comb, Neighbour's impressed wax sheets, or simply a narrow strip of molten wax run down the centre of the bar; either of these plans answers, but how to fix the wax guide to the wood has always been a trouble. Various smelters have been invented, but they are troublesome from the liability of the hot wax to congeal before the operation is successfully completed. This led me to set my wits to work and bring my chemical knowledge into use to discover some solvent for wax which would make a good cement; after trying several things, the result was the "liquid wax" I exhibited at the British Bee-keepers' Association's Conversazione, and which answers the purpose admirably, not only for a cement, but to form a wax guide itself when desired. It is made thus: take of wax cut up small 1 oz., put it into a wide-mouthed stoppered bottle, and add to it 1 oz. of benzine or benzole, not benzoline; in twenty-four hours it will be found to be a paste which may be rubbed smooth on a slab with a pliant table-knife. The benzole has the well-known gassy smell, but being highly volatile passes completely away after a few hours' exposure to the air. In cementing on the strip of guide comb use the cement as a bricklayer does mortar in laying a brick, pressing the comb into it, or a ridge of the cement may be placed on the bar. I have tried it both ways, and find the bees have not the slightest repugnance to it, showing that no trace of the benzine is left.—John Hunter, *Eaton Rise, Ealing.*

DRIVING BEES FROM SUPERS.

As your correspondent, "W. G.," is not alone in finding it rather difficult to rid a super of honeycomb of its bees, a few words here may help others as well as himself. On taking a super from a hive the first thing to be done is to sever it from the hive by drawing a fine wire between the two, then raising the super about three-eighths of an inch by wedges to allow the bees to lick the honey clean from the broken cells. They generally do this in less than an hour. As soon as it is done, smoke from fustian or corduroy rags should be blown into the super by the top hole in abundance. This smoke makes the bees run from the super into the bottom hive.

This easy and simple mode answers well in warm weather, for often not a bee remains behind. In colder weather bees are not so easily dislodged. On two or three occasions we have had to use a small bit of brimstone rag amongst the fustian rags ere we could make the bees leave the supers. The smallest taste or sniff of sulphur fumes terrifies bees and makes them run for their lives. But the greatest precaution is necessary in using it, for if given freely, or even in moderate doses, it would kill the bees amongst the combs; and dead bees between the combs of a super could not be taken out without injuring the combs. Sulphur should not be used by inexperienced people. If a dozen or two of bees remain amongst the combs after the smoke of fustian rags has been applied, we take the super off for a few minutes and cover it with a cloth, then carry it to the door of the hive in which the noise of the bees attracts and withdraws the bees from the super. Once make them run, bees are like a flock of sheep or a pack of hounds in following one another. In running from super to hive the bees make a

sound as they do in swarming, and this sound or noise soon empties the super of every bee. All this may be done in a very short time, and I think there is no better mode of ridding supers of bees than the above.

There are instruments invented and sold for this work, but I have never required anything of the kind. Sometimes we have not had time to contend with a few stubborn bees in the combs of supers, and have carried the supers into a cellar and placed them at a distance from the window, which was opened to let the bees fly out and go home. Sometimes we have placed the supers on their crowns and covered them with a bit of flannel or woollen cloth. As soon as the combs became cold the bees left them and settled on the woollen cloth. In resorting to the cellar the process is slower, and therefore the danger of having the combs spotted by the bees is greater.—A. PETTIGREW.

THE CARR-STEWARTON HIVE.

THERE are this year very many modifications of bar-frame hives presented to our notice and offered for sale at prices ranging between 10*s.* and 50*s.* per hive. The modifications in most of them are so slight and unobservable that it takes an expert to discover them and tell us what they are for. But the Carr-Stewarton hive is a distinct combination of two hives and two principles very dissimilar.

The principle of the Stewarton hive is united to that of the common bar-frame hive. The Carr-Stewarton hive is a three-decker, or three-storeyed, and is managed on the Stewarton principle. The hive I saw is neatly made and pleasing to the eye—far more symmetrical than most bar-framers. When all its parts are put together it stands about 17 inches high, and is 13 inches wide inside measure. In each of the three compartments there are windows all round, and wooden blinds or shutters hung on hinges and neatly fitting. It is quite a fancy hive, and likely to please ladies and amateurs. Its price complete is about £2 without the cover. The hive I saw has a framework of wood very neatly filled with straw; the materials of this hive are therefore unobjectionable, but some of the same kind of hives are, I believe, made wholly of wood. The hive in question contains two kitchens and a pantry, or two stock boxes and a honey box. The stock boxes are 5½ inches deep or thereabouts, and the stock box 4 inches deep.

As the inventor doubtless meant it for a honey hive, he may not be offended if I look at it from a practical point of view. When a box or compartment of a hive is only 6 inches deep, with frames inside, the combs in the frames must be very shallow—too shallow for vigorous growth and prosperity, and the bees in the bottom box too near the door when they first begin to breed in spring. Shallow hives are not the best for breeding purposes. Hives 10 or 15 inches deep are much better for breeding in than those that measure 5 or 6 inches only. I am of opinion that for great results in honey or honeycomb this Carr-Stewarton hive is too complicated and small. For honey-gathering I should prefer a hive with one compartment only, or "stock box," one-third larger than both stock boxes in this hive; but the appearance and the workmanship of the Carr-Stewarton are admirable.—A. PETTIGREW.

OUR LETTER BOX.

TUMOUR IN HEN'S CROP (*W. H.*).—Tumours such as you describe usually arise from the general unhealthiness of the fowl. As we know nothing of either the management or feeding you adopt, we cannot advise you.

REARING YOUNG TURKEYS AND GUINEA FOWLS (*David Drake*).—Young Turkeys require to be fed almost like young Pheasants. They should have at first bread and milk, some chopped egg, mixed ground oats or ground barley, in which onion tops may be chopped very fine and mixed. In cold and trying weather they may have some beer to drink, and some bread soaked in ale to eat. They also like curd made with good milk, and they thrive on it. One most important thing is that the hen should be kept in confinement, or she will drag the poults through the dewy grass, and lose half of them. The hen should be put during the day where she has the most sun; and when the poults are three weeks old she may be let out, but only when the grass is perfectly dry. You may treat Guinea Fowls the same; but they may be let out earlier with the hen, say at a fortnight's end, but that must be when it is dry.

SEED FOR BULLFINCH (*Subscriber*).—Summer rape seed crushed or steeped now and then in water all night, and afterwards dried in a cloth. It is more suitable than canary seed. Occasionally give a little hempseed, also a little crushed plain biscuit and green food, such as watercress or small salad. No sweets. The buds from the ash, oak, or pear trees may be given. A part vegetable diet will tend to rectify the bird's system, and cure it of the hoarseness. The bird's stomach is evidently out of order.

POSTPONING HIVING A SWARM (*J. H. D.*).—Shading a swarm as it hangs on a tree does not prevent the bees from seeking a more comfortable home, and one in which combs can be built; and it does not prevent them from going to one as soon as it is found. You should have hived your swarm as soon as possible after it settled on the tree. In about ten days after the hive swarmed you may have a second swarm. For three days and nights before a second swarm issues the young queens may be heard piping.

PREVENTING SECOND SWARMS (*A. S.*).—It is an easy thing to prevent hives from casting off second swarms. Young queens generally come to perfection in about ten days after the old queen has left the hive with the first swarm. As soon as piping commences or one young queen is hatched, all the royal cells may be cut out of the hive. When this is done no after-swarming will take place. If all the royal cells containing queens cannot be seen or reached the bees of the hive could be wholly driven out in a few minutes, and thus the bee-master can do what he likes. But the simple operation of driving the bees out generally sets at liberty the confined princesses. They are, in a sense, prisoners in cells, and when their keepers and attendants are alarmed and scared by the drumming and tumult of the hive they bolt out of their cells. If all the queens thus bolt out no after-swarming will take place, even if all the queens be thrown back with the bees into their hive. If any of the princesses remain in their cells they could be cut out before the bees are cast back.

FEEBLE HIVE (*Amateur*).—We much fear that your feeble hive is not worth the trouble and expense of nursing. It would be far better to fumigate the few remaining bees and obtain a new swarm to put in their place. They would pay you in the end far better. It is quite clear from your account that they have lost their queen through old age or some accident. Before you put a swarm into the hive examine the condition of the comb, and cut out any of it that looks defective or moth-eaten.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

DATE.	9 A.M.					IN THE DAY.				
1875. May.	Barometer at 32° and Sea Level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.		Radiation Temperature.		Rain.
		Dry.	Wet.			Max.	Min.	In sun.	On grass	
	Inches.	deg	deg.		deg.	deg	deg.	deg.	deg.	In.
We. 19	29.630	54 0	47 5	W.	56.9	62.0	43 2	114.0	42.2	0.200
Th. 20	0 782	55.4	49.4	S.W.	55.2	58.4	43 7	99 2	42.4	0.072
Fri. 21	0 772	63.0	56.1	S.S.E.	54.9	73.6	52 0	123.7	49.5	0.010
Sat. 22	0 857	59 1	52.2	S.	55 8	56.2	51.0	1 4.8	48.0	—
Sun. 23	30.155	59.0	50 2	S.	54 2	65.8	45.8	114 5	43 0	0.030
Mo. 24	0 433	59 9	52 5	S.W.	55 2	70.4	43.2	117.0	42 2	—
Tu. 25	0 321	61 2	56.0	S.W.	56.5	72.6	45.2	124 3	42.2	—
Means	29.993	58.8	52.0		55.5	67.0	46.3	112.6	44.2	0.312

REMARKS.

19th.—Sometimes very bright, sometimes dark; loud thunder and vivid lightning commencing at 2.10, but it was neither near nor long-continued; very bright night.

20th.—Fair but overcast in morning, rain at intervals, and much colder towards evening.

21st.—Fine morning, showery afternoon, fine evening and night.

22nd.—Dull morning, fine at noon, showery afternoon, fine evening; but the wind high all day.

23rd.—Very fine and pleasant all day, rather cool at night.

24th.—Bright pleasant day throughout.

25th.—Another fine, pleasant, but not hot day.

A pleasant spring week; temperature a little lower than in the preceding week.—G. J. SYMONS.

COVENT GARDEN MARKET.—MAY 26.

THERE is no particular change in the condition of the markets since last report, supply and demand being about equal. The only deficiency worth noting are the usual good samples of Peaches and Nectarines that are to be seen at this season. English Pines have been in better request, but heavy consignments from St. Michael's *vid* Lisbon are in the river, and will be sold in a few days. Potato trade heavy; large consignments from Jersey and Guernsey on hand.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples..... ½ sieve	2	6	to 3	6	Mulberries..... lb.	0	0	to 0	0
Apricots..... box	2	6	4	0	Nectarines..... dozen	15	0	30	0
Cherries..... do.	2	0	4	0	Oranges..... ₩ 100	5	0	14	0
Chestnuts..... bushel	0	0	0	0	Peaches..... dozen	15	0	30	0
Currants..... ½ sieve	0	0	0	0	Pears, kitchen..... dozen	2	0	3	0
Black..... do.	0	0	0	0	dessert..... dozen	0	0	0	0
Figs..... dozen	8	0	12	0	Pine Apples..... lb.	4	0	8	0
Filberts..... lb.	0	0	0	0	Plums..... ½ sieve	0	0	0	0
Cobs..... lb.	0	0	2	0	Quinces..... dozen	0	0	0	0
Gooseberries..... quart	0	8	1	0	Raspberries..... lb.	0	0	0	0
Grapes, hothouse.... lb.	6	0	12	0	Strawberries..... lb.	6	0	16	0
Lemons..... ₩ 100	8	0	12	0	Walnuts..... bushel	8	0	12	0
Melons..... each	6	0	10	0	ditto..... ₩ 100	1	0	1	9

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... dozen	8	0	to 6	0	Leeks..... bunch	0	4	to 0	0
Asparagus..... ₩ 100	3	0	6	0	Lettuce..... bunch	1	0	2	0
French..... bundle	0	0	0	0	Mushrooms..... pottle	0	9	2	0
Beans, Kidney.... ₩ 100	2	0	0	0	Mustard & Cress..punnet	0	2	0	0
Broad..... bushel	0	0	0	0	Onions..... bushel	4	0	8	0
Beet, Red..... dozen	1	0	3	0	pickling..... quart	0	6	0	0
Broccoli..... bundle	0	0	1	6	Parsley.... doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	0	0	0	0	Parsnips..... .. dozen	0	9	1	0
Cabbage..... dozen	2	0	0	0	Peas..... quart	2	0	4	0
Carrots..... bunch	0	6	0	8	Potatoes..... bushel	2	6	5	0
Capsicums..... ₩ 100	0	0	0	0	Kidney..... do.	3	0	5	0
Cauliflower..... dozen	4	0	8	0	Radishes.. doz. bunches	1	0	1	6
Celery..... bundle	1	6	2	0	Rhubarb..... bundle	0	4	0	9
Coleworts.. doz. bunches	3	0	4	0	Salsafy..... bundle	1	6	0	0
Cucumbers..... each	0	6	1	6	Scorzoners..... bundle	1	0	0	0
pickling..... dozen	0	0	0	0	Seakale..... basket	0	0	0	
Endive..... dozen	2	0	0	0	Shallots..... lb.	0	3	0	4
Fennel..... bunch	0	3	0	0	Spinach..... bushel	3	0	4	0
Garlic..... lb.	0	6	0	0	Tomatoes..... dozen	6	0	0	0
Herbs..... bunch	0	3	0	0	Turnips..... bunch	0	3	0	0
Horseradish..... bundle	0	0	4	0	Vegetable Marrows..doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	JUNE 3—9, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
						m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
3	Th	Royal Society at 8.30 P.M. Linnean Society at 8 P.M.	69.4	44.2	56 8	49 af 3	7 af 8	29 af 6	53 8	2	2 12	154
4	F	Royal Horticultural Society Adjourned Meeting.	69.3	44.4	56.9	48 3	8 8	50 7	4 9	3	2 2	155
5	S		70.5	47.3	58.9	48 3	9 8	7 9	14 9	4	1 51	156
6	Sun	2 Sunday after Trinity.	69 9	47.6	58.8	47 3	10 8	21 10	25 9	5	1 41	157
7	M		69.3	46 5	57 9	46 3	10 8	34 11	36 9	6	1 30	158
8	Tu		70.6	46.4	58 5	46 3	11 8	after.	49 9	7	1 19	159
9	W	Geological Society at 8 P.M. Leeds Horticultural [Society—Floral Fêts.	70.8	47.2	59.0	46 3	12 8	2 2	7 10	☽	1 7	160

From observations taken near London during forty-three years, the average day temperature of the week is 70 0°; and its night temperature 46 2°.

THINNING FLOWERS AND FRUITS.

BY reducing the number of fruits borne by a plant to a reasonable limit we thereby gain size and quality; but although this is believed and acted on to a certain extent by all fruit-growers of any pretensions, it is too often deferred so long as to make it of little or no use. If it is once admitted that thinning is beneficial it would certainly be more consistent with reason to thin as early as possible. Rose-growers and Chrysanthemum-growers for exhibition need no spurring-up to make them thin their flowers betimes; they know full well that if they want fine specimen flowers they must thin early, so that the good things which Mother Earth supplies for nourishment may not be too much subdivided. If this is the case with flowers, the greater part of which are abortive, how much more must it be so with the flowers of fruits, which must of necessity be fertilised before they can swell.

Now, I have a very strong impression that this act of fertilisation is the hardest work a fruit tree has to do. It generally takes place before the tree has perfect root and leaf action, and often during the most unfavourable weather. An abundant bloom on fruit trees is an event I have a particular dislike for, it so very often produces barren results. Every flower must have a certain amount of supply from the plant to insure its fertilisation, and the supply we know is limited. A large tree might be able to perfect with ease a thousand flowers—an addition of an extra five hundred would be too much of a strain on it. Well, then, supposing instead of a thousand there are many thousands, perhaps millions, there must be a tremendous struggle going on for the mastery—not a civil war, but a sort of all-round fight, and the result is frequently the utter annihilation of all the combatants.

Thinning the flowers before expansion would have prevented this; it cannot be done with large trees, but there is no difficulty about small trees, such as are usually grown in gardens, and it is these small garden trees which fall oftener than the more natural-grown orchard trees do, and for this reason—they are pinched time after time during the summer and induced to make fruit buds where, if left to themselves, wood buds only would be produced, and the consequence is a superabundance of fruit buds.

I have nothing particular to say against this system of producing miniature fruit trees; they are very handsome and very interesting, but if carried to the extreme the form of the tree and the beauty of the flower is often all one has for the trouble. To have fruit we must be prepared to sacrifice a little of the beauty of the flowers either by pulling them off singly before they expand, or, what is better, by pruning the fruit spurs in autumn, as soon as growth is finished, to a reasonable number.

With regard to stone fruits, I have proved over and over again the utter fallacy of deferring the final thinning till after stoning, and I am pleased to see that Mr. Douglas at every favourable opportunity advances views on this subject in harmony with my own. Thin immediately swelling commences, leaving a few extra fruits in case some should be deformed from the flowers having been injured. Do not leave the fruits till they grow to the size of marbles and then say you will try this system, it will be too late then. When practicable thin partially before the flowers expand; half the number of flowers are so placed that they will be of no use if they set, and it must be folly to leave these at least to the detriment of those which are well placed.

One of the evils of overcropping is that it prevents leaf growth. You may see a Peach tree or a Vine indoors receiving the best of attention in every other respect, but is too heavily cropped, the growth of which at certain times when there is a little extra strain on the plant—say at the time of flowering or stoning—is completely at a standstill. When this is the case it ought to be taken as a warning that the work the plant has to do is too much for it. Without continual healthy leaf action you cannot have fruit either large or of good quality. Probably the cause of fruit falling at the stoning period is owing to this stagnation of growth of foliage produced by overcropping. Certain it is that moderately cropped trees, if healthy, do not drop their fruit.

Thinning ought not to stop at stone fruits. Nothing pays for thinning better than the Pear; and let those who will sing the praises of late Peaches, they are welcome to sing about them and eat them too, as long as I can lay hold of a Doyenné du Comice or a Beurré Superfin Pear.—William Taylor.

CUT-BACK ROSES.

I think Mr. Reynolds Hole, one of the greatest authorities on all Rose matters, has laid down a dictum in his book on Roses that to grow blooms fit for exhibition they must be grown from the bud on the Briar. In other words, only maiden Briar blooms are fit for exhibition. Now I think this axiom has been over and over again proved to be false, and I should like to ventilate in your columns this question—Is not a cut-back plant either a Manetti or a Briar Rose equal to the maiden blooms of the Briar if cultivated with the same care? My own opinion is most decidedly yes, and I can produce most excellent evidence that this opinion is by no means a rash one. I will ask any of your readers who saw them to recall to their minds the Roses which Mr. Baker of Heavitree showed at the Crystal Palace, Hereford, and Exeter in the year 1871. At Exeter he showed forty-eight Roses in the open class for a £10 cup, and beat Mr. Keynes of Salisbury. Now he was here showing entirely from cut-back Manetti Roses, while Mr. Keynes were all maiden blooms. At the Crystal Palace, and at Hereford, he was first in every amateur class, as also in the open class for twelve blooms of the same Rose. He had not that year a maiden plant in his possession. This year he will almost entirely be showing from cut-back Manettis, and I prophesy that he will show such

blooms as have never been seen since 1871 on any amateur's stands.

Let anyone, then, who thinks that to grow prize blooms they must bud their own stocks, look out for his Roses at the shows this year, and compare them with the nurserymen's maidens. The year I won two firsts in the only classes I showed at the Crystal Palace was 1872, when I did not possess a maiden plant, and since I have budded my own I do not think my blooms have been so good.

I am not writing this in the interests of nurserymen, but simply to open a question which I think will interest all lovers of the Rose. Indeed I believe the nurserymen (though greatly against their interests) will almost to a man condemn my proposition. But why will they do this? Simply because they have nothing to do with cut-back plants; they know very little of them; their object is to sell all their stock year by year, and they will at the close of a season even sell at a sacrifice rather than not clear their ground. Mr. Walters of Exeter at the close of the season sells splendid Manetti plants at 5*s.* a dozen. The nurserymen then show entirely from maiden plants, and they speak according to their experience. But let anyone walk down a line of Roses at one of our nurseries in June or July, and see what a lot of coarse bad blooms there is, redeemed only by a few magnificent blooms here and there. I venture to say that he will see far more bad blooms there than he will in his own or any other amateur's carefully tended rosery.

Then the advantages of growing cut-backs are numerous. In the first place you are doing good to some of the best fellows that ever walked, I mean the large Rose nurserymen. You keep their trade going like a house on fire, and doing good to others should be one great principle in all that appertains to the queen of flowers. Secondly, you save space and time to an enormous extent. Let anyone look at the space, say, that a thousand or two thousand Briars take up in a nursery, and then look at the time those take before they give you blooms. They are planted in November, and it is not till June or July in the second year that your Briars become Roses. Thirdly, then the failures. These represent in amateur collections a very large per-centage of the whole; while, on the other hand, one of our large nurserymen rarely sends out any but strong plants, which nearly always do well. Fourthly, then there is the weary labour of budding, of tying, untying, rubbing out the wild growth, tying up the young growing shoot, the expense of the bast, the disappointment of some of your choicest Roses being destroyed by the wind in spite of all your efforts. Lastly, the late development of these maiden plants. The Crystal Palace fixture is often too early for the maidens, never for the cut-backs.

These and many other reasons cause me to recommend cut-backs to all whose space is the least limited, who want quick returns for their money and care, and who want to compete at the early shows. If you have space and unlimited money at command, then go in for both kinds so as to secure succession; but if you are obliged to choose between one or the other, grow cut-backs.

I am writing this in the hope of its eliciting discussion and any amount of contradiction. "I likes to be despised" in Rose matters, so long as my despisers know anything about the matter; but what I like much better is to see any subject connected with the Rose discussed in the columns of our Journal, which I consider is the greatest friend that the queen of flowers possesses. I know that there are a vast number of your readers who look out week after week for articles or letters on Rose culture, and that the more men read the more they cultivate Roses.—John B. M. Camm.

ROYAL HORTICULTURAL SOCIETY.

June 2nd.

Considering all the surrounding circumstances—the real impediments, the hard sayings, the failures of the minor shows, the unsympathetic tone existing, it is a matter of surprise that there is a show at all to report. "Great" only in name was the general prognostic of the principal display of the season, and it was never expected that for quality or extent the exhibition would be worthy of its designation as the "Great Summer Exhibition of the Royal Horticultural Society." Still the display is a good one, the quality of the plants sent being more noticeable than the quantity. They were staged in the two conservatory corridors, and were the objects of generally favourable criticism. The plants exhibited for Mr. Bull's prizes were extensive and valuable, and as being the introduction of one firm in the course of three years speak volumes for English commercial enterprise. Referring to the classes we find several empty, but those occupied generally contained good plants.

In the class for twelve Orchids Mr. Douglas staged bright, healthy, well-bloomed plants of Cattleya Warneri, Dendrobiums Farmeri, Bensoniæ, and nobile; Lælia purpurata, Cypripedium spectabile, Phalænopsis grandiflora, Masdevallia Harryana, and Oncidiums papilio, ampliatum major, and phymatochilum. The first prize was awarded to him.

Mr. Douglas also exhibited in the open class, and had the premier award. His group consisted of Orchis foliosa, exceptionally fine; Dendrobium thrysiflorum, noble spike; Masdevallia Whitbourniana, very bright; Cypripediums spectabile and barbatum, Lælia purpurata, &c. Both these were clean bright groups.

For twelve new plants, Orchids excluded, Mr. Bull had Phyllotænium Lindeni in fine form, capital examples of Pritchardia grandis, and Kentia Moorei, Anthurium crystallinum, Dracænas, Crotons, and the beautiful Fern Pleocnemia Leuzeana. Mr. Williams had two noble weeping tree Ferns, Cyathea Burkei and Alsophila Williamsii, a large Ficus Parcellii, Dracænas, Crotons, &c.

For eight greenhouse Azaleas (nurserymen), Messrs. J. Ivery and Son, Dorking, staged densely-bloomed pyramids, 4 feet high, of Flag of Truce, Reine des Pays Bas, Chelsoni, Forget-me-not, Tricolor, Charles Encke, Oracle, and Madame de Cannaert d'Hamale. This was the only collection in the class, and was worthy of the first prize awarded.

For six Azaleas (amateurs), Mr. Ratty, gardener to R. Thornton, Esq., Sydenham Hill, was the only exhibitor with the same immense pyramids which he exhibited at the Palace. Criterion is fully 6 feet in diameter at the base; Burlingtonia, a beautiful deep pink, is a globe 6 feet over; while Extranei, Iveryana, and Gledstanesi are considerably larger. They had the first prize.

For fifteen Azaleas (open), the first prize was awarded to Messrs. Ivery & Son, who had plants varying from 18 inches to 3 feet in diameter, and closely bloomed. The most striking were Mars, Iveryana, Duchesse Adelaide de Nassau, Surprise, Grand Crimson, very beautiful; Fanny Ivery, and a seedling with a singular mixture of white and scarlet blooms. This was a well-grown and highly attractive group of plants.

For twenty fine-foliaged plants in pots not exceeding 12 inches in diameter Mr. Bull exhibited a bright and beautiful group of medium-sized plants, of which Paulinia thalictrifolia, Croton Weismani, Dracænas regina and Goldieana, and Pandanus Veitchii were remarkably well grown. The Palms also were good. Smaller plants were staged by Mr. Wills, of which Sphærogyne latifolia, Aralia fastigiata, Zamia Lehmanni, Xylophylla latifolia, Dieffenbachia nobilis, and Terminalia elegans were very ornamental. Mr. Aldous also exhibited, and had the third place. For nine fine-foliaged plants (nurserymen), Mr. Wills exhibited a large Pandanus Veitchii, Phormium tenax variegatum, Encephalartos villosus, Dieffenbachia, Dracænas, &c.—a very good group. Mr. Aldous competed, but his group was deficient in bright colours.

For twelve Palms in 8-inch pots (open), Mr. Bull exhibited bright glossy plants, of which Verschaffeltias melanochætes and splendida, Dæmonorops palembanicus, Cocos Weddelliana, and Hyophorbe Verschaffelti were the most noticeable. Mr. Wimsett, however, was first with larger but not such choice and attractive plants. In the class for six Palms (nurserymen), Mr. Wills had large plants but deficient in lustre, but merited the first prize which was awarded them. For six Crotons (open), really excellent plants were staged by Mr. Bull of Weismanni, Youngii, volutum, undulatum, spirale, and majesticum. These were fine in health and good in colour. Twelve Dracænas and Cordylines (open), Mr. Bull had healthy and well-coloured plants in 12-inch pots, varying from 2 to 5 feet in height, of D. Baptistii, Chelsoni, Fraseri, regina, Mooreana, triumphans, Shepherdi, Weismanni, rex, magnifica, amabilis, and the distinct and effective species Goldieana. Smaller but equally well-conditioned plants were staged by Mr. Wills of the above-named sorts, with the addition of excelsa, Macleayi, very dark; Guilfoylei, Kaiorkiana, Youngii, and Dennisonii. Probably no finer plants than the above have ever been exhibited.

In Class 36, six new plants, Orchids excluded, Mr. Bull staged a rich group, amongst which Blandfordia princeps was conspicuously beautiful. He had also quaint Pilocerus, Lomaria Doboydeusis; Dracænas canescens, bright green and white, and Goldieana; Anthurium Scherzerianum album, and Palms in variety.

Six Lilies (open).—Nice plants were staged by Mr. Bull of Auratum, Tigrinum splendens, pyrenaicum, Szovitzianum, davauricum erectum, and bulbiferum umbellatum, and a first prize awarded. This was the only entry in this class.

Twelve hardy perennials (open).—Mr. R. Parker was first with fine specimens of Lupines, Pæonias, double Pyrethrums, &c. A smaller but a very nice group coming from Mr. Dean, Ealing. Hardy plants were not staged so well as at previous shows.

For twelve hardy Ferns (nurserymen), Messrs. J. Ivery & Son

were first with fresh good plants 3 feet in diameter, of which the different varieties of Lastrea Filix-mas and Athyrium Filix-fœmina; Polyetichums angulare, Wollastonii, and decurrens; and Osmunda regalis cristata were the most noticeable. Second place being given to Mr. R. Parker, Tooting, with small but equally attractive plants. Some of them, however, can only by a stretch of terms be pronounced hardy.

For two Dasyliriums Mr. Croucher, gardener to J. T. Peacock, Esq., exhibited two good plants and had a first prize; the first prize for six Yuccas going to the same exhibitor, who had good plants of aloifolia quadricolor, A. variegata filifera, Mooreana, conspicua, and Eylesii. Mr. Croucher was also first for two Beaucarneas.

In the Miscellaneous classes a group of Dracænas was exhibited by Mr. Wills. Mr. Laing staged Pandanuses, Ferns, Aroids, and bicolor Pelargoniums in undeniable health. Mr. Dixon, Beverley, exhibited three plants—a Dracæna, Palm, and Pteris, which did not appear to be an improvement on existing sorts. Mr. Williams exhibited a small and elegant group of ornamental decorative plants, Erica Eximia and the Flamingo Plant being particularly bright. Mr. Wills exhibited an extensive collection, consisting of a groundwork of flowering plants, relieved by Palms and Ferns, and edged with the green Moneywort—a very pleasing and attractive group, superior to that with which he won the first prize at the Palace on Saturday. Messrs. Kelway & Son set up thirty-six beautiful blooms of double Pyrethrums, and Mr. Parker twenty-four Irises and Pyrethrums.

In the class for six Cycads Mr. Bull staged a valuable group, consisting of Dioon edule, Cycas revoluta, Macrozamia spiralis, and Encephalartos majesticus, villosus, and Vroomii.

For the Davis competition prizes Mr. W. Kemp, gardener to the Duke of Northumberland, exhibited nine medium-sized plants, evidencing superior cultivation, of Gonstyllis tulipifera, Aphelexis macrantha purpurea, Acrophyllum venosum, Boronia serrulata, Dracophyllum gracile, Clerodendron Balfourii, Erica Cavendishii, and Epacris miniata splendens. For six Tree Ferns Mr. Wills was the only competitor, with specimens 10 feet in length of trunk and nice heads.

In Class 68 for prizes offered by Mr. Bull for collections of plants of his introduction, the first place was assigned to Mr. Thynne, Great Western Nurseries, Glasgow, who had a splendid Encephalartos villosus ampliatus, fine Dæmonorops palembanicus and periacanthus, Macrozamias plumosa and spiralis eburnea, Dracænas, &c.—a well arranged and excellent group. Second Mr. Wimsett, Ashburnham Park Nursery, immense Maranta, Palms, Dracænas, Crotons, &c. Mr. Cypher, Cheltenham, securing with small plants a third prize. Mr. Wright, Lee, Kent, had a first award with Dæmonorops palembanicus, Dracæoas, Marantas, &c.—a handsome collection. In Class 70 Mr. Dixon, Hull, staged a fine Macrozamia spiralis eburnea, excellent Dracænas and Crotons, Aralia Guilfoylei, Maranta Makoyana, &c., and was placed second. In Class 67 (amateurs), Mr. Croucher, gardener to J. T. Peacock, Esq., Sudbury House, Hammersmith, was first with Palms, Dieffenbachias, Dracænas, Marantas, Macrozamias, Nidulariums, &c.; Mr. Legge being second; and Mr. Pilgrim, Fairlawn, third with a nice lot of small plants. A prize was also awarded to Mr. Coomber, gardener to Lieut.-Col. Wilkinson, Fitzroy Park, Highgate, for an attractive group. In the class for exhibitors not previously winning Mr. Bull's prizes, Mr. Legge, Cleveland House Clapham Park, staged one of the best cultivated groups in the Exhibition, Dieffenbachia nobilis, truly noble; Dipladenia Brierliana, Dracænas, &c., in excellent colour.

FRUIT.

Of Grapes fifty-four bunches were exhibited. The first prize for three bunches of Muscat of Alexandria was won by Mr. Bonse, gardener to D. McIntosh, Esq., Havering Park, with nicely finished examples; second honours going to Mr. Douglas, and third to Mr. Stephenson, gardener to F. C. Barker, Esq., Leigh House, Essex. For three bunches of Buckland Sweetwater, Mr. Douglas secured the first prize with three fine bunches and a second prize for Canon Hall Muscats, immense berries, but rather poor bunches. Mr. Bones had a second prize for Dutch Sweetwater, and Mr. Bannerman second for Grizzly Frontignan. Foster's White Seedling were exhibited by Mr. Bannerman and Mr. Lane. Black Hamburghs were very fine. Mr. Douglas was first with good bunches, very black, and even in berry; Mr. Brush, gardener to Lady Hume Campbell, being second, and Mr. Bannerman, gardener to Lord Bagot, third.

Fine bunches of Black Hamburgh and Foster's White Seedling were exhibited, not for competition, by Mr. Harrison, gardener to the Earl of Derby.

Of Pines, five fruits were exhibited. For two Smooth-leaved Cayenne Mr. Miles, gardener to Lord Carrington, had first prize for good fruits. A first prize was also awarded to a fine specimen of the same variety to Mr. Harris, gardener to Mrs. Vivian, Singleton, Swansea. In Class 49 a first prize was awarded to a very fine fruit exhibited by Mr. Grant, gardener to J. B. Glegg, Esq., Withington Hall.

Handsome Tomatoes and superior Chilies were exhibited by Mr. Miles, and had a bronze medal awarded.

In Green or Pale-flesh Melons there were only two exhibitors. The first prize fell to Mr. Gilbert, gardener to the Marquis of Exeter, Stamford, with Colston Bassett Seedling. Second, Mr. W. Stevens, gardener to J. B. Elliott, Esq., Chesterfield Park, Essex. Class 66, for Scarlet-fleshed kinds, Mr. Gilbert was again first with Read's Hybrid. Second, Mr. Stevens, with Malvern Hall. Third, Mr. W. Sanders, gardener to J. East, Esq., Longstock House, Stockbridge, Hants, with Ward's Netted.

For fifty White Cherries Mr. G. T. Miles, gardener to Lord Carrington, High Wycombe, Bucks, secured the prize for a fine plate of Elton. In Black Cherries, Mr. Miles was again first with Black Circassian, also fine.

For Strawberries of the British Queen type there was a small competition. Mr. Douglas, gardener to F. Whitbourn, Esq., Loxford Hall, Ilford, came first with a dish of very fine fruit of Augusta Nicaise. Second, Mr. J. Pottle, gardener to Sir R. Wallace, Bart., Ladbourne Hall, Wickham Market, with British Queen. Third, Mr. W. S. Stevens with the same variety. For any of the Sir C. Napier or Sir Joseph Paxton type, the first prize again fell to Mr. Douglas for Dr. Nicaise. Second, Mr. Ridout, gardener to W. S. Brown, Esq., Woodhatch Lodge, Reigate, with Sir C. Napier. Third, Mr. Pottle, with Sir Joseph Paxton.

For Figs, any kind (open), Mr. J. Pottle was first with White Marseilles, and Mr. Miles second with a dish of Brown Ischia.

For a dish of Peaches, any kind, the first prize was won by Mr. Miles for a dish of well-ripened Stirling Castle, and for a dish of Nectarines the same exhibitor took a first prize.

For the prizes offered by Messrs. Sutton & Sons for six dishes of Peas there were two competitors. Mr. Pragnall, gardener to D. W. Digby, Esq., Sherborne Castle, Dorset, had fresh and full examples of William I., First Crop Blue, Emerald Gem, Ringleader, Little Gem, Bijou.

For Messrs. Carter's prize for six varieties of Peas there were also two competitors, Mr. Pragnall again winning with fine dishes of Blue Peter, First Crop, Premium Gem, White Gem, Unique, and William I..

For Messrs. Suttons' prizes for four varieties of Melons and four varieties of Cucumbers, Mr. Read, the Gardens, Arley Hall, was the only exhibitor. Of Cucumbers he had Telegraph, Tender and True, Marquis of Lorne, and Duke of Connaught. Of Melons, Golden Perfection, Horticultural Prize, Victory of Bath, and Read's Hybrid.

An erection by Messrs. Weeks & Co. representing an entrance to a conservatory was neat, strong, and ornamental, and well adapted for its purpose; it attracted the notice of visitors.

FRUIT COMMITTEE.—Henry Webb, Esq., in the chair. Mr. John Gardner, gardener to Sir J. D. Astley, Bart., Elsham Hall, Brigg, sent his seedling Melon Duchess of Edinburgh, raised by crossing Bromham Hall with Bodorgan Orange, but unfortunately it was not ripe, and required ten days longer to be able to judge of its merits. Mr. John Booth, the Gardens, Osmaston Manor, Derby, sent fruit of Wright's Favourite Melon, a large, long oval fruit, with a deep orange-netted skin; but it did not possess sufficient merit to warrant the Committee to recommend it. Mr. Booth also sent another large one called Osmaston Manor, with a paler and more netted skin. This was not ripe. Mr. James Batters, the Gardens, Chilworth Manor, Romsey, sent a fruit of the true Smooth-leaved Pine weighing 5¼ lbs., which at this season was considered as an evidence of skilful cultivation, and it was awarded a cultural commendation. J. J. Watts, Esq., Whistley Farm, Devizes, sent a dish of a seedling Plum called Improved Orleans. The Committee pronounced no opinion as to its novelty, as the information they possessed on the subject was insufficient; but they awarded a cultural commendation. Mr. William Gardner, the Gardens, Eatington Park, Stratford-on-Avon, sent a dish of good early Peaches, which received a cultural commendation.

Messrs. James Carter & Co. sent specimens of their Fern-leaved Parsley, the Covent Garden Garnishing, and the Champion Moss Curled. The Fern-leaved has the leaves cut into very fine thread-like segments, and has a close knotted appearance; the others are more or less curled after the fashion of the old curled Parsleys. Henry Webb, Esq., Redstone Manor, sent specimens of young Peas very much affected with the caterpillar of a dipterous insect.

FLORAL COMMITTEE.—R. W. Postans, Esq., in the chair. First-class certificates were awarded to Mr. W. Bull, King's Road, Chelsea, for Oncidium curtum, a very ornamental species with a golden yellow lip irregularly margined with brown spots and blotches, sepals and petals brown and yellow; the growth is like O. sarcodes; to Messrs. T. Cripps & Son for Clematis Lord Nelson—it does not seem to be free-flowering, but the flowers are of great substance and of a distinct bluish purple colour; and to Mr. B. S. Williams, of Upper Holloway, for Polystichum lepidocaulon. Second-class certificates were voted to G. F. Wilson, Esq., of Weybridge, for Lilium Hansoni, a very fine species of the Martagon group. It was figured in the "Botanical Magazine" as L. avenaceum. The leaves are

arranged in whorls as in L. Humboldtii, and the colour and spotting are also similar to Humboldtii. To Messrs. Crippe for a very free-flowering sweet-scented Clematis named Lady Alice Nevill; and to Mr. W. Bull for Pelargonium Prince of Wales, a bright red variety of the Queen Victoria type.

Mr. Wilson had Lilium Thunbergianum splendens, certainly the finest of the species that has yet been shown.

Messrs. Cripps sent seedling Clematis Blue Perfection, Maid of Kent, and Duke of Edinburgh, Quercus striata, and Crataegus filicifolia. Cut Aquilegias camo from Mr. Webster of Gordon Castle; and Æchmea Maria Regina from Messrs. Dixon of Beverley.

A vote of thanks was given to Messrs. Veitch of Chelsea for a collection of cut flowers of Ixias, Iris, &c.

Messrs. W. Barron & Son, Elvaston Nurseries, Borrowash, Derby, sent a collection of new Coniferous plants—Retinospora tetragona aurea, a very pretty species from Japan; Cupressus Lawsoniana elegantissima, which has more white in its composition than any other variety, and if true to its character will be very useful; Taxus elvastonensis aurea, very distinct; Retinospora pisifera aurea, very fine. Many other distinct species were in the collection.

Mr. E. Holmes, Whittington Nurseries, Lichfield, sent a species of Juniper from Virginia, an erect-growing species of graceful character. Seedling Pyrethrums from Messrs. Kelway of Langport, Galopin red and Eugénie white, were of very fine character. Mr. W. Thomson of Clovenfords Vineyard received a vote of thanks for a very spike of Vanda suavis with nineteen flowers.

BATH AND WEST OF ENGLAND SOCIETY'S SHOW.

CROYDON, JUNE 1st.

THE horticultural tent at the Bath and West of England and Southern Counties Association is always a prominent feature of attraction to visitors. This year it is no exception, for the Hon. and Rev. J. T. Boscawen has spread a floral feast of no mean order. He has disposed of his material to the best advantage, and produced an example of plant-grouping which is—as it was meant to be—instructive. As a rule the arrangement of plants is too close and formal, notably was this the case at the Palace on Saturday last. But Mr. Boscawen will tolerate no crowding, or permit no flatness, whereby one plant only hides the deformity of another. Neither will he follow the stereotyped plan of arranging the "highest at the back;" but he boldly brings to the front towering Tree Ferns, and around their stems is grouped in the most agreeable manner Orchids, Mosses, and stove plants.

This, it must be remembered, is not an ordinary exhibition, where the plants are grouped in classes, but the whole are arranged with a view to the best aggregate effect. Thus we find a charming combination of Adiantum farleyense and brilliant Cattleyas. We find splendid examples of Utricularia montana from Sir W. Marriott associated with noble Stag's-horn Ferns from Messrs. Rollisson & Sons, and elegant Palms from the Rev. A. H. Bridges. We notice handsome stove plants from Mr. Stephenson Clarke intermingled with equally good specimens from Mr. Crowley, and Orchids from Mr. Brymer. We find gorgeous Rhododendrons from Mr. Noble surmounted with handsome Dracænas from Mr. Bridges, and flanked by Palms from Messrs. Rollisson. Thus does Mr. Boscawen exercise his taste, and labours with an energy which commands success to spread a feast not only for gratification but also for instruction.

To enable him to carry out his designs he solicits plants from all who are able and willing to contribute, and sends the best acknowledgment in his power to gardeners who respond to the invitation. Thus voluntaryism and good feeling are the main springs of the Exhibition, and whoever knew these agencies to fail? True some large exhibitors failed to fulfil engagements, but even that was a favour rather than otherwise, for the tent was filled, and any further addition would have been an incubus rather than an attraction.

Amongst those who contributed to the Exhibition was Mr. King, gardener to Stephenson Clark, Esq., Croydon Lodge, who sent an extensive collection, comprising Palms, Ferns, Pandanuses, Selaginellas, a good Clerodendron, and the bright yellow Verbascum chrysophyllum. The plants were healthy and well grown. Equally good were those from Mr. Strachan, gardener to Philip Crowley, Esq., Waddon, consisting of good Crotons, a fine Rhyncospermum, an excellent Blandfordia nobilis, Ericas, Dieffenbachias, Gloxinias, and the attractive Saxifraga nepalensis. Mr. Penfold, gardener to Rev. A. H. Bridges, Beddington House, sent excellent Palms, Tree Ferns, capital Dracænas, Nepenthes, a very good Maranta fascida, &c. Mr. Hill, gardener to Sir W. Marriott, Down House, Blandford, sent remarkably well-grown Orchids and other good plants. Orchids also came, both in plants and cut blooms, from W. E. Brymer, Esq., M.P., which were well grown and interesting. Messrs. W. Rollisson & Sons, Mr. B. S. Williams, and Mr. Noble also contributed well; and Messrs. Paul & Son, Cheshunt, sent their specimen Roses. The plants are being admired by thousands of visitors, and Mr. Boscawen has the satisfaction to feel that his labours are appreciated.

In the show grounds we noticed as prominent objects the seed and root museums of Messrs. James Carter & Co. and Sutton & Sons, which are enjoying a good share of patronage. Horticultural erections are exhibited by Messrs. Dennis & Co., Boulton & Paul, Parham, Cranston, &c. The weather is bright, and visitors numerous.

CRYSTAL PALACE FLOWER SHOW.

MAY 29TH.

A FALLING barometer on Friday, and a drizzling morning succeeding, portended an unfavourable day for the first great summer Exhibition, which was held in the Central Transept on Saturday last. The day, however, although dull was dry, and enabled a large number of spectators to visit the Palace and Show. It was worthy of their patronage, for the display was an excellent one, equal, perhaps, to the best of past years, and superior to most of them. But the most gigantic plants appeared dwarfed in this lofty transept in comparison with the effect the same plants would produce in a large marquee. Still, even in the Palace the noble Roses, gorgeous Azaleas, massive Heaths, and fine stove and greenhouse plants asserted their power of attraction, and compelled a recognition of their intrinsic excellence. Not quite all the classes were filled, but in most of them was good competition, and an idea of their numbers is conveyed when we note the plants extended down each side of the transept to a length of 150 yards.

In the nurserymen's class for twelve stove and greenhouse plants Messrs. Jackson & Son, Kingston, occupied the premier position with remarkably good specimens, of which the most striking were Azalea Petuniæflora, a huge pyramid of rich pink; Anthurium Scherzerianum, good; Dracophyllum gracile, a remarkable close and fine specimen; Boronia pinnata, an excellent plant; Hedaroma tulipifera, very fine; with Clerodendron Balfourii, Aphelexis macrantha purpurea, Pimelea Hendersoni, very dense; and Erica depressa multiflora. Mr. B. S. Williams had second honours with a valuable group, comprising Azaleas, Aphelexes, Ericas Tricolor Wilsoni, and Cavendishii, Hedaroma tulipifera, Allamanda grandiflora, very bright; Bougainvillea spectabilis, Medinilla magnifica, &c. Mr. Morse, Epsom, was third with smaller but good plants, of which Hedaromas, Aphelexes, Ericas, and an Ixora were the most effective.

In the amateurs' class Mr. Ward, gardener to F. G. Wilkins, Esq., secured first honours with nine splendid examples, consisting of Anthurium Scherzerianum with about fifty spathes, an immense Genetyllis tulipifera, a handsome Statice, a good Erica and Aphelexis, a capital Azalea, &c. These were perfect globes of bloom of 5 to 6 feet in diameter, and in excellent condition. Mr. Chapman, gardener to J. Spode, Esq., Hawkyard Park, and Mr. Peed, gardener to Mrs. Treadwell, St. John's Lodge, Lower Norwood, were placed equal second. Mr. Chapman's best plants being a grand specimen of Ixora Prince of Orange, Heaths, Eriostemons, and Azaleas. Mr. Peed's, which were larger but not better, consisting of Clerodendron Balfourii, Francisceas confertifolia and calycina, Azaleas, &c.

In the nurserymen's class for fine-foliage plants Mr. Williams staged a group of large plants, but deficient in light and bright colours, which did not show to advantage with the fine lively groups of the amateurs. In these Mr. Legge, gardener to S. Ralli, Esq., Cleveland House, Clapham Park, was worthily placed first with a well-grown collection, bright, fresh, and beautiful. Crotons Weismanni and Younghii were admirably finished, while Dracæna Baptistii, Alocasia Lowii, a Dieffenbachia, and Palms were in excellent order. Mr. Chapman, gardener to J. Spode, Esq., was placed second with larger plants but less bright, consisting principally of Palms. Mr. Child, gardener to Mr. Torr, Garbrand Hall, being third, his best plants being Gleichenia speluncæ, a Dicksonia, and a highly coloured Croton Weismannii.

In the nurserymen's class for nine Cape Heaths Messrs. Jackson & Son secured first honours with plants combining good size with fine quality. The best were Ericas ventricosa coccinea minor, mutabilis, Shannoni, ventricosa grandiflora, and tricolor speciosa; Mr. Morse being second with medium-sized well-bloomed plants, of which E. Devoniana, E. Perspicua nana, and E. Westphalengæ were noticeable. Amongst amateurs Mr. Ward was first with six plants of undeniable excellence, embracing a gigantic example of Cavendishii, a fine Tricolor impressa, Eximia superba, a model, and a densely-bloomed Elegans. Mr. Peed was placed second with good Ventricosas, a superior Eximia, &c.; and Mr. Wheeler, gardener to Sir F. H. Goldsmid, third.

Azaleas were excellently shown; in the nurserymen's class Mr. Williams was the only prizetaker; the collections were extremely effective. In the amateurs' class of six plants Mr. Ratty, gardener to R. Thornton, Esq., The Hoo, Sydenham Hill, was a good first, with enormous pyramids fully 6 feet across the base and 7 feet high, each well finished. His most noticeable

plants were Holfordiana, Miltoni, Criterion, Stella, Gladstaneaii formosa, and Extranei. Mr. Child was second with obtuse pyramids 6 feet high, and Mr. Roach, gardener to C. Dorman, Esq., The Firs, Sydenham, third; the most attractive plant of his group was Model. Mr. Peed also exhibited well. In the open class for twenty plants Mr. Ratty was first with immense globular and pyramidal specimens in 15 and 18-inch pots; Mr. Turner, Slough, being second with medium-sized plants in 8 and 9-inch pots, the best sorts of which were noticed last week. In this class was a disparity between the schedule and exhibition card, the latter stating the pots should not exceed 12 inches in diameter, but as the schedule did not determine the limit Mr. Ratty was entitled to the prize for his fine collection, anomalous as appeared the award and condition card.

Orchids were a rich display. In the nurserymen's class for twelve Mr. Williams was first with the finest group this year exhibited. His Cattleyas were grand, Cypripedium barbatum very fine, Dendrobium densiflorum an excellent example, and the rest good. Messrs. Jackson & Son had second honours with a fine Cattleya Mossiæ, a beautiful C. Mendeli, excellent Vandas, &c. In the corresponding class for amateurs Mr. Ward won the premier place with a fine collection, the best being Dendrobium thrysiflorum with four fine racemes, Lycaste Skinneri, Odontoglossum Bluntii, Pescatorei, and phalænopsis, Cattleya Mossiæ superba, Oncidium sarcodes, &c., all the plants being in rare health and finely bloomed. Mr. Gray, gardener to H. Smithies, Esq., had second place with good plants, and Mr. Wheeler being placed third. In the class for six Mr. Ward was again to the fore; in this group he staged Odontoglossum vexillarium in fine form and colour, Phalænopsis grandiflora, Odontoglossum phalænopsis, Oncidium ampliatum, &c. Mr. Child was second with, amongst others, good plants of Aërides Fieldingi, Dendrobium Farmeri, Oncidium ampliatum major, and Cypripedium Stonei. Mr. Budd, gardener, Heathfield, had the third place. Mr. Peed also exhibited.

Mr. Lambert, gardener to H. W. Segelcke, Esq., Herne Hill, was placed first for six table plants with Cocos Weddelliana and other Palms, Adiantum gracillimum, Dracæna gracilis, &c. These plants were fresh and bright in small 32 sized pots. Mr. Hudson, gardener, Champion Hill, and Mr. Wills, Exotic Nursery, Onslow Crescent, were equal second. Mr. Hudson's best plants were Pandanus Veitchii and Croton Johannis, both in fine order; Mr. Wills having Aralia Veitchii, Pandanus Veitchii, Terminalia elegans very fine, Croton Weismannii, &c., Mr. Wheeler having the third place. Six excellently-grown Selaginellas were staged by Mr. Collins, gardener to R. H. Bristowe, Esq., Sydenham Hill, which were worthy of recognition.

In the class for nine Dracænas Mr. Wills was the only exhibitor. He staged plants of rare excellence.

Pelargoniums were well represented. For nine plants in 8-inch pots Mr. Turner had the premier award with symmetrical plants 3 feet through, good in bloom and colour. The best were Example, Mary Doyle, Blue Bell, Prince Leopold, Pompey, and the delicate white and pink Claribell; second honours going to Messrs. Dobson & Sons with Conqueror (lilac), Beacon, Thetis, Atalanta, Eclipse, &c. The above were not flat, but naturally-grown plants. In the corresponding amateurs' class Mr. Ward was first with the largest flat-trained plants in the Show, the most noticeable being Warrior, Prince Leopold, Maid of Honour, Royal Albert, and Mary Hoyle. Mr. James, gardener to W. F. Watson, Esq., having the second award with a level excellent group, the best being Prince Leopold, Snowflake, and Mary Hoyle. In the Fancy class Mr. Turner was first with well-bloomed medium-sized plants of Mrs. A. Wigan, Brightness, Neatness, Madame Sainton-Dolby, Ellen Beck (good), Acme, &c.; Messrs. Dobson & Sons being second with nearly the same varieties; a third award being given to Mr. Foreman. Mr. James, however, exhibited in the miscellaneous class the six best Fancies in the Exhibition.

Roses were numerous and fine. For nine plants Messrs. Paul and Son, Cheshunt, and Mr. Turner, Slough, the redoubtable champions, being placed first and second respectively. Messrs. Paul's plants were uniformly large; Mr. Turner's containing specimens unequal as to size. The blooms in both groups were grand, of the same sterling old varieties which have been previously enumerated. Who after witnessing these noble bushes would spend their strength on perfecting standards? In the class for twenty plants Mr. Turner walked over with fresh and beautiful specimens of popular varieties. For six plants (amateurs) Mr. E. Ellis, gardener to J. Galworthy, Esq., Coombe Warren, Kingston Hill, was first, and Mr. J. Mooreman, gardener to the Misses Christy, Kingston, second, with highly creditable collections.

In the Clematis class Messrs. G. Jackman & Son had no competitors. They staged Alba magna, the best of all; Mrs. Hope, lavender blue; Mrs. Gassiot, silvery lavender; The Queen, Vesta, &c.

In the groups arranged for effect Mr. Wills and Mr. Waters, gardener to A. Mongredien, Esq., were equal firsts. Mr. Wills' were good rich-foliaged plants, brightened by Azaleas, Spiræas, and Pelargoniums; Mr. Waters' group was composed almost wholly of flowering plants, which were good, but were too close and formal in the arrangement. Mr. Foreman, gardener to E. E. Nicholson, Esq., was second with a good and well-arranged collection; Mr. Peed being placed third for good plants, but deficient in foliage. Very effective groups were also staged by Mr. Thompson of the Crystal Palace.

For new and rare plants Mr. B. S. Williams was placed first with an interesting collection. Towering above the group was a grand weeping Tree Fern, Alsophila Williamsii, a plant of undoubted value and intrinsic beauty. He had also Dracæna Fraserii, Dipladenia Brierliana (a richly-coloured variety), Croton majesticum, Metroxylum filiare, &c. Mr. Ley, Croydon, was second with ornamental and healthy plants of Zamia Lindeni, Calamus pnyamo very good, Palms, Dracænas, &c.

Seedling Pelargoniums were exhibited by Mr. Foster and Mr. Turner. Of the show varieties Mr. Foster had certificates for Grace, Prince Rupert, and Malcolm; and Mr. Turner for Fancies Countess of Dudley, Duchess of Edinburgh, and Mrs. R. Baker; also to Forcing Pink Derby Day, a great improvement on Anne Boleyn.

Miscellaneous groups of plants were exhibited by Mr. Williams and Mr. Wills; fine tree Mignonette by Mr. Coulter and Messrs. James Carter & Co., who also had their striking Coleus Duchess of Edinburgh. Messrs. Dobson & Sons exhibited superior Calceolarias; and Mr. Satchell, gardener to J. W. Anderson, Esq., and Mr. Waters also had good collections. Mr. Parker, Tooting, staged a beautiful collection of hardy plants; Mr. Hooper, Bath, handsome cut blooms of double Pyrethrums and Pansies; Mr. Taylor, Headington, Oxford, charming boxes of Rose Devoniensis; and Mr. Chapman, Oxford, highly coloured Maréchal Niels. Mr. Smith, Isleworth, had variegated Pelargonium Alice. Mr. Laing exhibited an attractive group of plants, including finely coloured bicolor Pelargoniums; Mr. John Spittle, Birmingham, a collection of Tulips; and last, but not least, Messrs. Jackson & Sons staged charming plants of a hardy Saxifrage, S. nepalensis. These plants were perfect pyramids of bloom 2 feet high, literally covered with thousands of white star-like flowers.

First-class certificates were awarded to Mr. B. S. Williams, Victoria and Paradise Nurseries, Upper Holloway, for a number of new plants.

VINES UNDER GLASS.

A Practical Treatise on the Cultivation of the Grape Vine. By W. Thomson, *Tweed Vineyard.* Eighth Edition, enlarged. W. Blackwood & Sons, Edinburgh and London.

The fact that seven editions, amounting to ten thousand copies, have been sold in twelve years, and that the eighth edition is then required, is a testimony far surpassing any favourable criticism we can offer on the volume before us. It is the testimony of the gardening community. A thoroughly reliable guide for growing Grapes under glass was expected from Mr. Thomson, his practical knowledge and ability justified the expectation, and it has not been disappointed. In thirty-eight sections everything needed for instruction how to cultivate the Vine under glass, to avoid or overcome its diseases and insect enemies are detailed. On open-air culture Mr. Thomson scarcely gives any information, and he should have qualified his sentence that in Britain "the Grape Vine can only be grown in the open air with very partial success," by prefixing the word "North" to "Britain," for in the southern districts of our island it is so grown largely, and the outdoor cultivation is annually increasing.

ROYAL HORTICULTURAL SOCIETY.

My attention has been drawn to your number published May 20th, which evidently refers to me in a manner more pointedly than complimentary. I therefore request you in your next issue to state that your informant, whoever he may be, has no authority for the statement supplied you, that "in my capacity of auditor of the Society's accounts I have so egregiously failed as to pass accounts as paid which never have been paid, and for which I never could have seen the vouchers."

I beg to assure your readers that the accounts of the Society are well kept, that accounts are no novelty to me, and that I saw vouchers for every item; that I ventured to examine somewhat into the accounts prior to the year for which I was the auditor, and found ample evidence of the recklessness with which the displaced Council has brought this honourable Society to the verge of ruin.

If ruin is the unfortunate fate awaiting us the entire fault lies with the gentlemen who have left the present Council a legacy of debt beyond the power of any body of men to cope

with, against the antagonistic and open hostility of Her Majesty's Commissioners of 1851, who clearly care less for horticulture than I did when I first became a Fellow for the pure love of flowers upwards of thirty years ago. I may further add that the accounts have also the advantage of being vouched for by one of the most eminent firms of public accountants in England, so that the Fellows of the Society may feel certain of their accuracy.—HENRY LIGGINS, 3, *Ladbroke Square, W.*

[In the statement of revenue and expenditure for the year 1874 issued by the Council along with the report at the last annual meeting, there is credit taken by the Society for having paid the Pomological Director the sum of £95 16*s.* 6*d.* This statement is signed HENRY LIGGINS, *Auditor*. We are informed that not only has the Pomological Director never received a farthing of that amount, but that no such amount is due to him for the year 1874. Does Mr. Liggins assert that he saw the receipt of the Pomological Director for that payment?]

EARLY POTATOES.

THE Ashleaved Kidney Potatoes in Cork Market look riper than any I saw last week in Covent Garden Market. I am told the market here has been supplied during the last three weeks. You would be benefiting the farmers here if you could persuade them to devote fields to the cultivation of early Potatoes, Peas, &c., as their communications with Liverpool are so cheap and quick by water that with three-weeks advantage of climate, ventures in this way would certainly turn out remunerative.—P. N. W.

[Repeatedly we have advised the growers of Potatoes to cultivate none but early-ripening varieties. When we grew Potatoes we planted none but the true Ashleaved, took up the crop in July, stored them in layers alternating with sand in a dry cool cellar, and they were undiseased and supplied the table until new Potatoes were ready the next year.—EDS.]

THE ROYAL HORTICULTURAL SOCIETY—MASTER AND GARDENER.

LIKE other exhibitors I was much interested in the result of the Special General Meeting of the Royal Horticultural Society, and hoped against hope that something would arise out of the Meeting that would place the old Society once more upon a firm foundation, whereon we could all work together for the furtherance of the art for which the Society was instituted. Our expectations have once more been doomed to disappointment. Probably this will always be so until the Council are advised to consult the leading horticulturists as well as the general body of Fellows when they are in any difficulty.

About five or six years ago, when it was thought desirable to amend the schedule, all the exhibitors were summoned to a meeting convened by the Council by circular, and his Grace the Duke of Buccleuch did not think it derogatory to preside over that meeting, supported by the late lamented Bishop of Winchester. I was present as an exhibitor, and had the opportunity of stating my views on the matter with other gardeners. Major-General Scott, the Society's late Honorary Secretary, was also present, and everything was arranged to our entire satisfaction. Now, if a meeting of this sort had been convened at the time the Council determined to make the 50 per cent. deduction from the prizes, the exhibitors to a man would have supported the Council in whatever arrangement it was thought desirable to adopt: but unfortunately the present men who are in power prefer sledge-hammer argument to any system of conciliation. This was fully proved in the unwarrantable attack made by Lord Bury and the Treasurer of the Society on gardeners and their employers.

It is entirely the fault of the Council that the Fellows have to bear the humiliation of being dragged into the County Court, and I wish to state fully at the same time that I do not approve of the action taken by the exhibitors. Although one of the largest creditors amongst them, and however much I disapprove of the way the Council have managed the Society this year, I have too much respect for the honour of the Society ever to be prevailed upon to take action against them.

Another reason—fortunately I am not one of "those men" who are paid out of the prize funds. My kind employer pays large sums of money annually to support the exhibitions, and never has inquired how or when I receive the prize money. He was kind enough to say, when I thought it my duty to ask who was to receive the prizes, "You, of course;" and that is all that has ever passed between us about them.

Then as to wages. An employer might say, "Well, my gardener is making a good thing out of his prizes, it will not be necessary for me to raise his wages as I would have done if he had not been competing." This could hardly be said to be paying the gardener out of the prize money, but it would amount to the same thing. It has not been so with me; my employer naturally supposed that as his gardener was able to carry off a very large proportion of first prizes he must be a good gardener and worthy of encouragement, and my wages have been much increased in consequence.

I would rather—much rather—have refrained from entering into any personal relations between master and gardener; but if there is any impropriety in doing it the blame rests with Lord Bury, and his lordship either ought to say who are the employers who pay their gardeners partly out of the prize money, or if he cannot do this make ample apology for the expressions he has used. I am personally acquainted with nearly all the exhibitors, have known and had intimate relations with the most prominent of them for many years, and never yet have I heard any gardener say that part of his wages was paid out of his prize money. If reckless unproved statements continue to be made at meetings by members of the Council, and bitter feelings thereby engendered, the reconstruction of the Society on a satisfactory basis will be impossible.—J. DOUGLAS, *Gardener to Francis Whitbourn, Esq., Loxford Hall.*

NOTES AND GLEANINGS.

WE are informed that Professor W. T. THISLETON DYER is appointed to the office of Assistant Director of the Kew Royal Gardens.

—— PARSLEY.—In the neighbourhood of Chobham, Surrey, they have a lore that if Parsley seed be sown on any other day than Good Friday it will not come double.—(*Notes and Queries.*)

—— WE have before us two PORTRAITS OF ROSES raised by Mr. W. Paul. We usually mistrust coloured portraits of flowers, but as we have seen one of these Roses, Star of Waltham, and the picture is no exaggeration of that very fine and sweet-scented flower, we are willing to believe that the other portrait of Queen of Waltham is truthful, and if so, it is a still finer Rose than Star of Waltham.

—— THE PRIZE LIST of the Stamford Horticultural Show to be held on September 15th and 16th is most liberal. The premiums amount to £300. There are thirteen silver cups and no entry fees. Nottingham also offers in prizes for the Show on July 8th, 9th, and 10th the sum of £750, the Rose prizes alone being £240, which should ensure a free response. Liberal prizes are also offered at Burton-on-Trent on the 16th inst., and at Wakefield on August 28th.

—— "JACK-BOLLS."—This is a pet name for Potatoes in this part of Dorset. It has occurred to me that possibly this name may be a perversion of "jack-bowls," the smallest ball in the game of bowls, once most popular in this county, as elsewhere, being denominated the "jack," and fairly representing in size an average, or somewhat large, Potato.—C. W. BINGHAM, *Bingham's Melcomb.*—(*Notes and Queries.*)

SWEET-SCENTED ROSES.

I QUITE agree with my good friend Mr. Camm that the absence of scent is very much to be deplored in any variety of the queen of flowers; but while I delight very much in the perfume of the Tea Roses, I do not think it is to be compared with that of many of the Hybrid Perpetuals. To the list of those already given would you allow me to add that of a Rose which for this and its other good qualities deserves to be better known than it is, especially as it is an English-raised flower—I mean Van Moltke, raised and sent out by Messrs. Bell of Norwich? I gathered a bloom of it to-day from one of the few pot Roses I have, and anything more fragrant it is impossible to conceive—I mean in that peculiar attar of Rose perfume which is so grateful; while in build it is not unlike a really fine Alfred Colomb grown out of doors. I have not often seen this Rose recommended, but I believe it to be a really desirable variety.—D., *Deal.*

MANY thanks to Mr. Camm for broaching this odoriferous subject. I had determined—seeing that there will not be a general election of Roses this year, the Rose parliament being

biennial—to take up the matter of fragrance this year, with the consent, of course, of the powers that be. It will be well, then, for noses to be on the alert. In one of the replies received last year the subject was suggested, and I think it may be taken up this year, coupled with an election of the newer Roses. At least this is the idea that has occurred to me in connection with Rose elections for the present year.—JOSEPH HINTON, *Warminster*.

("The powers that be" cordially assent.)

NOVELTIES IN THE ROYAL GARDENS, KEW.

CHRYSANTHEMUM CATANANCHE, one of the choicest introductions resulting from the expedition to Morocco of Dr. Hooker, Messrs. Maw and Bull, is flowering on the rockwork. Besides being new to the science of botany, it is the *beau ideal* of a rockwork plant, being a dwarf perennial, brilliant in flower, and quite hardy. The rootstock branches freely, forming a dense tuft of many heads, with silvery leaves cut into linear segments. The flower stems are erect, 3 to 6 inches high, bearing one capitule nearly 2 inches in diameter, with the rays of a creamy yellow colour, and a band of rich maroon round the centre. The involucral bracts are broad, silvery white, and of hyaline texture, thus resembling Catananche, whence the specific name. On the Greater Atlas, at elevations of from 7000 to 9000 feet, it forms large patches on the slopes exposed to the sun, and in the rocky valleys. It is increased by division without loss, every piece being willing to grow. This is a good alpine for pot cultivation, succeeding well in such confinement.

Æthionema coridifolium of the "Botanical Magazine," a plant of true beauty, is here in flower. We do not mean that with the same name well known long ago, and sometimes as a beautiful weed; but quite a different plant from a cultivator's point of view—the Iberis jucunda of Scholt and Kotschy, introduced some time ago by Messrs. Backhouse. It is no less charming, and having a delicate less rambling habit is more suitable for select rockwork of limited extent. The height in this case is about 3 inches, and every branch bears a dense raceme of pink flowers. Truly they are more like Æthionema than Iberis, therefore a good name to distinguish it from the original would be Æ. jucunda. It certainly belongs to the former genus, and not the latter. Native of Asia Minor and Lebanon.

Philydrum glaberrimum is flowering in the Temperate house, and, like the above Chrysanthemum, is new to science as well as to cultivation. It was introduced by Mr. William Bull. Though not possessing the showiness necessary for popular decoration, it is ornamental, and also of botanical interest. It forms a tuft 3 feet high, of dark green ensiform leaves an inch in breadth. The flowers are ivory white, thickly disposed in handsome panicles, which rather exceed the leaves. This makes a third species for the curious order Philydraceæ, there having been only two known hitherto, each forming a genus. It is supposed to be a native of the Pacific Islands. Philydrum is remarkable and interesting from the flowers having a dimerous perianth and only one stamen.

Azalea linearifolia flowering in the same house may be defined as a floral *curio*. The leaves are graceful, about 3 inches long, and very narrow. The corolla lobes are also long and narrow, and being divided to the base, or nearly so, render the plant quite distinct and unique in appearance. It is a native of Japan, and cuttings strike freely.

MARKET GARDENING AT MANCHESTER.

THE township of Sale was once called Sale-moor, and properly so, for the greater part of it was covered with heather, growing in thin black light soil resting on a bed of gravel and white sand 12 feet deep. It is fast being covered with good property, and becoming a healthy suburb of Manchester. It is five miles from Manchester, and is on the Cheshire side of the river Mersey. The trade of the place may be said to be market gardening; indeed it seems to form the central township of an extensive camp of market gardeners. The Smithfield Market of Manchester, like Covent Garden of London, is the central vegetable mart for an immense population. Many of the large and populous towns of Yorkshire, and almost all in Lancashire save Liverpool perhaps, are chiefly supplied with vegetables from the Manchester mart. And the greater part of them are grown in this neighbourhood.

The soil here is exceeding light and hungry, but healthful and easily worked. It is rented at about £5 and £6 per statute acre, and stable manure costs 10*s*. per ton. Notwithstanding the high rent and dearness of manure the market gardeners seem to do well, being industrious and clever in working and cropping their land. The London market gardens, and the rotation of crops taken from them, interested me much some twenty or thirty years ago. First came Radishes and Lettuces, which realised from £40 to £50 per acre; next a crop of French Beans, and this was followed by Colesworts, all well done in one year, and profitable. The farmers in this locality catch the spirit of the market men in endeavouring to obtain all they can out of their land.

Strawberry-growing forms a large element of market gardening here. Many farmers make large plantations of Strawberries, and realise, I am told, about £100 per acre in good seasons from the fruit. The soil here evidently suits Strawberries, for it yields heavy crops of them for many years in succession. As soon as possible after the fruit is picked the leaves of the plants are mowed off with a scythe and the beds dressed a little. This is all that is done. Someone may say the cutting the leaves off is a mistake, or as the late Dr. Lindley put it some thirty years ago, it is like cutting the lungs out of a man. The leaves were cut off the plants thus in the garden where I served my apprenticeship, and the plants bore immense crops. In this locality the practice answers well. I am of opinion that the young leaves do more real work for the plants than the old foliage would if left on. The price paid for gathering Strawberries is 6*d*. per dozen quarts, and we have heard of able hands earning very great wages at the commencement of some seasons.

Manchester is celebrated for its Celery, and nowhere else can we find better Celery, seldom any so good. The men here make no fuss about growing fine Celery. The drills are made and manured in the ordinary way, but the plants are planted early and small from the seed bed, instead of being pricked out and coddled in a frame. I never saw Celery from a gentleman's garden equal to some produced for the Manchester market. The plants when dibbled in the trenches are so small that they can scarcely be seen for a time. Celery makes a profitable crop, and is quite equal to fallowing for cleansing foul land. As Celery is much hardier than most gentlemen's gardeners fancy, some of them would do well to try early plants from the seed bed.

Horseradish of all vegetables has the least attention given to it in a gentleman's garden, and is generally grown in some out-of-the-way corner, owing, in some measure, to the fact that when once in the ground it is difficult to eradicate. At Stretford and adjoining township, on the Lancashire side of the river, Horseradish is grown and produced in beautiful condition, every stick of it thick, straight, and clean, very unlike the short knobby, knotty, ugly stuff so often produced from the odd corners already alluded to. Horseradish here is grown somewhat after the fashion that Seakale roots are prepared elsewhere. Long roots of it (Horseradish) are taken up, and the side roots on these are cleaned off, so there will be at least 12 inches of clean stems from the crowns or leaves to the feeding roots. These long roots are planted in a slanting direction underneath the ground, and when fully grown they may be taken up as large and straight as an Altrincham Carrot. They fetch a good price at the proper season.—A. PETTIGREW.

THE EVERGREEN OAK.

OF this, *Quercus ilex*, there are seven varieties:—1, *Integrifolia*, plain-leaved; 2, *Serratifolia*, saw-toothed-leaved; 3, *Fagifolia*, Beech-leaved; 4, *Crispa*, leaves wrinkle-edged; 5, *Latifolia*, broad-leaved; 6, *Longifolia* or *Salicifolia*, long or Willow-leaved; 7, *Variegata*, white-edge-leaved.

Which of the varieties a correspondent, "M. F.," intends to plant we do not know, but we can say that the foliage of all is very dark green, and that it is a tree which rarely is effective unless planted far in the rear of others with paler foliage; it then gives an appearance of depth to any recess.

It is one of the best of trees for affording shade to a seat placed beside its stem. An example may be seen near the Round Pond in front of Kensington Palace. A tree similar to our engraving is now in flower at Loxford, the delicate green of its catkin-like inflorescence contrasting finely with its foliage, and is very ornamental.

Near London and in the more southern counties it grows rapidly from the planted acorn, attaining to about 20 feet in height in ten years. It then grows slower in tallness, but

spreads rapidly, and becomes the good shader we commend it for.

The Evergreen Oak does not well bear transplanting, and Mr. Robson some years since published in our pages—"I believe the most successful results have been accomplished by planting in May, and even at the end of that month; but I only give this advice on the authority of a friend, as I have not personally transplanted at that time. Young trees are also recommended. If the weather is dry and bright some shading is desirable for a few days, and a shower of rain will work wonders; by the end of summer the tree will have assumed its proper costume, and all will go on well. If I had a plantation of this tree to make in the autumn I would be disposed to adopt the most primitive mode of all, and that would be to

Fig. 101.—Evergreen oak (Quercus Ilex).

put in the acorn where the tree was to grow, and if the soil and subsoil were all right I would leave the rest in a great measure to Nature."

In the excellent and accurate little volume published by The Christian Knowledge Society on "The Forest Trees of Britain," by the Rev. C. A. Johns, it is noted that the Evergreen Oak is a fellow-countryman of the Latin classic poets, from whom it has received frequent and honourable mention. Even with us it attains a considerable size; but in the milder climates of Italy, Spain, &c., it becomes a large tree, and reaches an age equal to that of some of our most venerable Oaks. Hence it not unfrequently acquired an historical interest, and for this reason perhaps, more than for its picturesque beauty, it was made the theme of poetic song. The Roman naturalist Pliny, who flourished in the first century of the Christian era, mentions a tree growing in the Vatican which claimed a higher antiquity than Rome itself. It had brazen letters in the ancient Etruscan characters affixed to its trunk, from which it would appear that, before the Roman name was known, it was a sacred tree. Its age must therefore have been eight hundred years at least. The shape of the leaf varies greatly in different individuals, and even not unfrequently on the same tree, being sometimes scarcely notched at all, at other times deeply serrated, and at others quite quickly. It is this last

variety which has procured for it the name of "Holm-Oak." It also resembles the Holm or Holly tree, in having its most prickly leaves on the lowest branches. The acorn, which does not arrive at perfection until the second year, resembles that of the Oak, but is somewhat more slender, and the cup is scaly. Some trees bear sweet and edible acorns; those produced by others are bitter, and both kinds are sometimes to be found on the same tree.

THE VERATRUMS.

The Veratrums or Hellebores are a genus of plants possessing powerful medicinal properties; indeed they are highly poisonous, owing to the peculiar alkaline principle found in the root, and known as veratrin. A small dose of this administered to the lower animals is sufficient to cause instant death. It also acts with singular energy on the mucous membrane of the nose, exciting violent sneezing if only the most minute particle is taken. The leaves of V. album when reduced to powder form the well-known white hellebore which has been used so effectively in destroying the Gooseberry caterpillar. But as being ornamental rather than medicinal we would notice this family of plants.

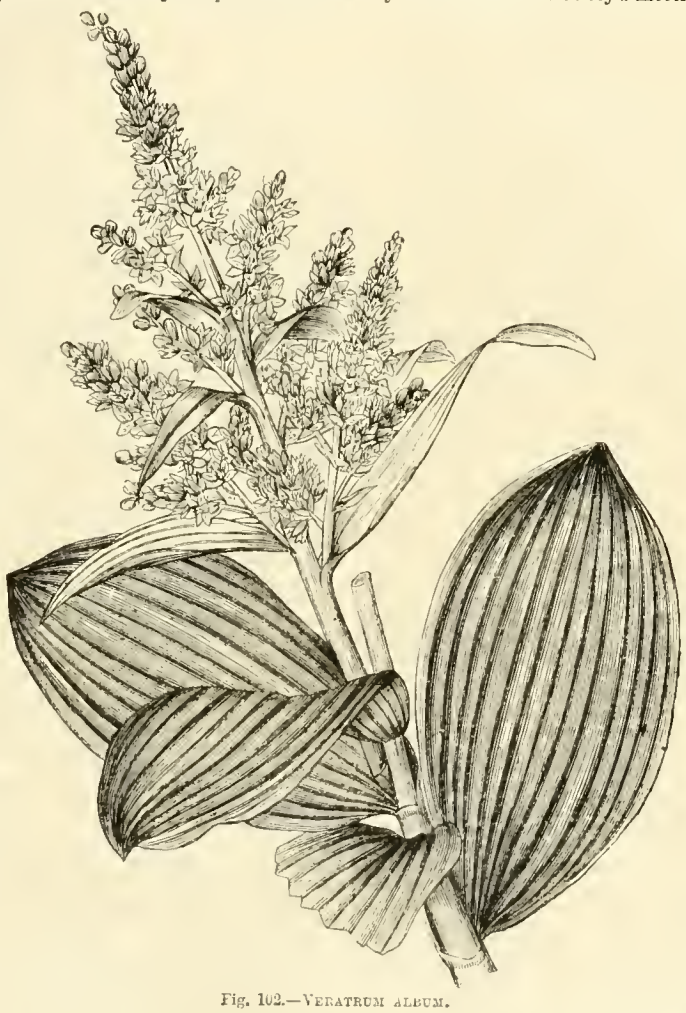


Fig. 102.—Veratrum album.

The name of Veratrum is taken from *vere*, truly, and *ater*, black, in allusion to the colour of the roots. They belong to the natural order of Melanthaceæ, and are hardy herbaceous perennials. Some of the species are handsome border plants of distinct and stately appearance. They add to a noble spike of flowers foliage which is distinctly ornamental by its stout texture, expansive form, and the bright green and regularly corrugated appearance of its surface.

The best of the species is V. album, and, except for the sake of variety, the others are not worthy of culture in our gardens. V. album is, however, a distinct and striking plant, and possibly, were it tender and required some nursing, it would be regarded as an ornamental sub-tropical plant. Certainly where foliage is expected to play a part in garden decoration this plant is worthy of a place; it also possesses features of attraction in habit of growth and flower. It is a native of the Alps and Pyrenees, and was introduced as long ago as 1548.

As an alpine plant of robust growth it is one of the best, and is worthy of a place on bold rockeries, and rooteries, and rustic mounds. It will also flourish admirably in the open border, and is suitable to plant at the front of shrubberies. It will grow in any soil, but to flourish to perfection it should have deep rich loam, such as Rhubarb delights in. It will then grow to a height of 5 feet, and its bold white spikes are decidedly ornamental in the middle of summer.

V. nigrum, or the dark purple-flowered species, is much the same in habit as the preceding, but does not grow so tall, and is less ornamental; while V. viride, V. parviflorum, and V. angustifolium are destitute of attraction in the flowers, and are only interesting by their habit and foliage.

V. album, as the figure suggests, is worthy of cultivation, and is now being taken care of by those who possess the plant, but who have for a long time suffered it to be neglected. It is readily increased by division of the roots in the spring, just when the plant is making fresh growth, which is the ordinary mode of propagation. Plants may also be raised from seed.—W.

FORCED VEGETABLES IN POTS.

In the Journal of May 13th, No. 737, in the report of the Royal Horticultural Society's meeting was noticed some forced vegetables grown in 8-inch pots, and exhibited by Mr. T. Batters, gardener, Chilworth Manor. Being on a holiday recently, I paid Mr. Batters a visit, and saw the forced vegetables growing. I can assure the readers of the Journal there is no deception in the growing of these vegetables in pots. There they may be seen — Peas, Broad Beans, Kidney Beans, Potatoes, Vegetable Marrows, and Tomatoes—all growing in 8-inch pots, and they are the picture of health and fruitfulness.

Mr. Batters kindly turned out a root of Potatoes to show me, and there were fifteen good moderate-sized tubers to a single 8-inch pot. The tubers varied in size, some being very large for the space they had to grow in.

The Peas were really superb, and an excellent crop too; the variety was Maclean's Little Gem, a first-rate early wrinkled dwarf Marrow Pea, and excellent for forcing. The seed is sown about the middle of November, and when up thinned out, leaving six Peas to a single pot, of which there were fifty. They are kept in a cool vinery all the winter where frost is excluded. When it is required to keep the house at a higher temperature after the Vines have been started the Peas are removed to a cooler house, and kept as near the glass as possible, with plenty of air daily. Mr. Batters informed me he had already gathered three gallons, and at the time of my visit there were from seven to eight good-sized pods to a single haulm and averaged seven large peas to a pod.

The Canadian Wonder Beans were also splendid, being very prolific and the pods being of great length. Broad Beans were also excellent.

The Tomatoes, Orangefield Dwarf, quite surprised me. The plants were raised by cuttings struck in October, 1874, and potted-on into 8-inch pots. There was some splendid fruit on the plants, which carried a heavy crop.

The Vegetable Marrows were also raised from cuttings in October, the varieties being Custard Marrow and Moore's Vegetable Cream, the latter being the most prolific. The plants were in excellent health, and bearing abundantly. My time was very short and hurried, otherwise I should have

been able to have given a more accurate detail of the above vegetables.

At the same place may also be seen Watercress in pots, and other things in the vegetable and salad way. I hope Mr. Batters will give us a few remarks on forced vegetables, &c., some time in the Journal, as it will be very beneficial to those gardeners having but a small amount of labour, and at the same time are expected by their employers to have everything just the same as those who have greater conveniences at their command.—F. H. Froud.

[The vegetables referred to were highly creditable examples of pot-culture.—Eds.]

NOTES on VILLA and SUBURBAN GARDENING.

KITCHEN AND FRUIT GARDENS.

A few general remarks at this busy time will doubtless be of some service, and it is well to remind villa gardeners that much of their success depends not only in insuring comparative tidiness, but in the proper attention to all their crops at this time of the year; and again, while there is yet time to make up for any main crop of which there is likely to be a deficiency, it will be best to sow again at once. Therefore take care to examine all crops, and judge from their appearance whether more is required; and further, by hoeing and stirring the soil well now it destroys such an extensive progeny of weeds, and benefits the crops also, which greatly lessens the labour during the remainder of the season. If the late crops of Potatoes are not earthed up they should be at once; delay in this matter often injures them, because the small rootlets run so wide that it is impossible to mound the earth without checking their growth.

Early Celery should be earthed a little, previously pulling the suckers off if any are showing. Plant out another row for succession, and prepare trenches for the general crop, which ought to be pricked out and growing on a border preparatory to planting out. Plant another row of Scarlet Runners if room can be found for them, and earth-up and stake those which are growing fast. This crop thrives best if it is not allowed to suffer from the want of water from the time it comes up till it has done bearing. It is one of the most profitable vegetables.

Cauliflowers just coming in from hand-glasses should be well supplied with water, or the produce will be small and more quickly run to seed. Sow at once a small quantity of seed to supply an early autumn crop, and do not in finally planting out neglect to give them a rich soil, and yet they had better be in the open garden than on a hot sunny border under a wall at this season. Onions—if necessary, prick-out a lot of the best on ground previously prepared, taking care that they are not planted deeper than they were when taken up. Thin out the remainder of the crop before they become too large.

Sow a good breadth of ground with Turnips for early autumn use; it will be best, perhaps, to first decide how much ground can be spared for this crop, and then sow a portion now, and again at the end of the month. This will insure a succession which will be useful a considerable time. The seed ought to be sown in a shady place instead of a hot or sunny one. If Parsnips are not thinned out they should be at once, leaving them about 8 inches apart, and take care that the ground is well stirred between them. It cannot be done after the foliage has covered the space allotted to them. Where Leeks are grown it will be as well to prepare a place on a rich piece of ground, or make small trenches as for Celery, and prick them out at once. Another lot may follow as soon as the ground can be prepared for them.

Plant out Brussels Sprouts at once, and also Snow's and other early Broccoli, and then if ground cannot at present be spared prick-out all other successional crops on good soil, to be finally transplanted at a more convenient time. Sow at once all the different sorts of late Greens to fill up spaces that are at present occupied with other crops, but let all the most forward sorts sown in April be planted out at once.

Asparagus continues to be plentiful, but it will be best for further supply if it is not cut quite so close as formerly; this will leave enough growth to keep the roots in a thriving condition, and be an assistance to next year's crop. Beds of this vegetable lately planted must be well supplied with water and kept clear from weeds, to insure the formation of crowns and more mature growth next year. Of Peas sow more as others appear above ground. Any of the Marrow sorts may be chosen, but if there is any choice do not sow them in the hottest part of the garden, but the coolest. Very hot spots do not suit Peas for late crops.

Plant-out the smooth-leaved sort of Cabbages for an autumn crop, and take care that the Ulm and other Savoys are planted out as soon as ground can be spared for them. But it often happens that in small gardens plots are not to be found for crops of this kind; therefore, to save time and insure a regular succession of vegetables, they ought to be planted between rows of other crops, such as Beans or Potatoes, which are likely to come off soon enough to allow them the place to themselves.

Strawberries appear to be setting freely, but they must have plenty of water if the weather should prove dry before they approach ripeness. The ground between the rows should be covered with grass or clean straw to keep the fruit clean when heavy rains fall, and as a mulching to prevent a rapid evaporation after watering.

Vines on walls will now need attention, for even if disbudding has been done the shoots remaining will need stopping a joint or two beyond the bunch, excepting those needed to fill up vacant spaces, which must be laid in all their length, and all shoots should be fastened to the wall. Continue the thinning of fruit on wall trees, and go on with the nailing of all shoots that are likely to be battered about by the wind, and on trees with green fly apply a frequent syringing with weak tobacco water.—Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

HARDY FRUIT GARDEN.

Beds of Strawberries require all the attention we can afford them; the fruit has set abundantly and well, and ought now to be thinned out. First in importance is giving the plants an abundant supply of water, and as soon as the water is applied to mulch the ground with short manure. We have given each plant about two gallons of water, and the mulching will retain the moisture. We shall, when the fruit has swelled a little more, support the trusses with sprays or small branchlets of elm and hornbeam that were prepared in the winter. This is the best way to keep the fruit clean, and it allows it to ripen better by allowing the sun and air to play freely around it. Those who cannot obtain these sprays will find a row of ordinary bricks either laid on edge or flat to be a good plan to preserve the fruit. It will lay on the bricks or hang over the sides. The porous material absorbs the heat, and gives it out slowly at night. Clean wheat straw laid between the rows answers very well, especially in dry seasons; but if it should be a wet season the fruit soon decays if not gathered as soon as it is ripe. The mowings from the lawn, tan, and cocoa-nut fibre refuse have all been recommended to be placed between the rows to preserve the fruit. Tan is the best of the three, but in some cases it would be better to allow the fruit to rest on the ground than to use either of them. The particles stick to the fruit, and cannot be removed without bruising it. All the runners will not be required for the purpose of increasing stock or for pot plants; when this is so only the runners required should be retained.

Newly-planted trees ought to be watered, and the ground over the roots mulched. If they have not started, freely syringing them night and morning will still cause some of the backward growths to push. Those who have had experience in planting fruit trees will have observed the buds start freely enough at first, and after a while they stop growing; this is the time to apply water to the trees from a syringe, and also to the roots if required. Mulching with rotted manure is also indispensable to keeping a moist equable temperature at the roots. The trees should also be securely staked.

Vines are not generally grown as wall fruit, but many amateurs and cottage gardeners have them on low walls. Sometimes they are well managed, at other places badly. In the south of England very good Grapes can be grown on walls facing south, south-west, or even on west aspects; but they always give the greatest satisfaction if plenty of young wood is trained up to supply the place of the old stems. The best system of culture is to train a rod horizontally right and left from the main stem about 9 inches or a foot above the surface of the ground. From these horizontal branches the young rods must be grown annually, providing the walls are low (good Grapes can be grown on walls 6 feet high); but on lofty walls it is not necessary or even desirable to renew the rods every year; but they may be renewed every third or fourth year, gradually laying in young shoots and taking out old wood, so that a steady renewal is constantly going on. The best Grape for open wall culture is the Royal Muscadine, but in favourable positions Black Hamburgh ripens, and even tolerably good Lady Downe's and Muscat of Alexandria have been produced. The Vine on the open walls is generally free from insect pests; but red spider will do mischief in hot dry seasons, and must be removed by syringing.

The larva of the lackey moth is now busy on the fruit trees; the webs forming the tent in which they lodge at night or in inclement weather are easily discerned. The pest ought to be destroyed when they are all clustering together. We have also noticed the Apple-boring maggot at work on the fruit that has just formed. If practicable the fruits attacked ought to be destroyed at once. The crop of fruit is so abundant that two-thirds might be removed. The Plum trees are free from aphis, and have a good crop of fruit; in all other respects all the trees are healthy.

VINERIES.

When the fruit is ripe the object of the gardener is to preserve it in good condition. If the weather is hot and dry the berries

soon show signs of shrivelling. This may be prevented by sprinkling water on the paths and borders of the house; it may also be necessary to water the roots. It is a very great evil indeed to allow the inside border to become too dry. All the time that the fruit is ripening, and hanging after it is ripe, the young growths are also ripening, the wood is being consolidated, and the buds from which will spring the future growths are being formed and matured, and this will not be done effectually unless a plentiful supply of moisture is sent up by the roots.

We have nearly finished thinning the fruits in late houses, but where little artificial heat has been applied it will now be time to see to the setting of the fruit. With the free-setting sorts there is no difficulty; but shy setters, as Royal Vineyard, Lady Downe's, Snow's Muscat, &c., the bunches should be gently shaken about 10 A.M. daily during the flowering period. A globule of moisture gathers on the stigma of some of the sorts, and this is removed by drawing the hand gently over the bunches, and assists the setting of the berries. We do not pinch off any lateral growths during the time the fruit is setting, but when the Grapes are set the laterals are pinched back and tied down to the wires, and the border receives a thorough soaking with manure water. In ten days or more after the first flowers open it will be time to commence thinning the fruit.

ORCHARD HOUSE.

We are thinning the fruit of all the trees, Peaches, Nectarines, Pears, Plums, and the finer varieties of Apples. We have from four to six dozen fruits from Peach and Nectarine trees in 15-inch pots. The trees ought not to carry a larger number than this, and if handsome exhibition specimens are required, three dozen Peaches and four dozen Nectarines will be a sufficient number. The growths are now stopped, and if too thickly placed they are thinned-out. The trees, and Strawberries on the shelves, are thoroughly syringed twice daily—in the morning at six, and in the afternoon about five. The pots are abundantly supplied with water, and about the middle of June the first dressing of manure will be applied to the surface of the pots.

GREENHOUSE AND CONSERVATORY.

There is now plenty of work in this department. Flowers do not last long in beauty at this season, and frequent alterations are necessary to keep up the display of bloom. Azaleas that have not been forced are now in full beauty. The plants must be shaded from the sun, and the house be kept as cool as possible to prolong the beauty of the flowers. Those plants that have flowered are removed to a warmer house to make their growth. They would not flower freely next season if they were allowed to make their growth in a closely shaded cool house. The shading ought to be fixed to rollers, so that it can be rolled up or let down at pleasure; it is a great mistake to fix a permanent shading to the roof, as the more light the plants receive the better.

Stage Pelargoninms, including the Fancy section, are now in flower. The Fancy varieties have not been so popular as usual, nor have the large-flowered sorts received that attention their merits deserve. Show Pelargoniums do not seem to be acknowledged by the "Pelargonium Society," nevertheless both sections are invaluable at this season of the year.

Roses are now very beautiful under glass. The decaying flowers must be cut off as soon as the petals are bleached and hang about loosely. The flowers ought not to remain on the plant until the petals drop off. The remarks last week by Mr. Camm on scented Roses were very opportune. Shape, substance of petal, and quality of the flowers have all taken precedence of the perfume. Now, with a very large number of Rose-growers scent is placed first, the other qualities after, and the aim of all the raisers is to obtain the best sorts for exhibition. Mr. Camm should add Bessie Johnson to his list of perfumed Roses, it is the sweetest in its class. As the flowers die off the plants are removed to a sheltered position out of doors.

Aquilegias are not much grown for greenhouse decoration, but some of the species are well adapted for this purpose. A. pyrenaica, A. leptoceras lutea, A. glandulosa, A. alpina, and A. coerulea if well grown are very handsome, and make an excellent change, as the colours are quite distinct from the everlasting zonals with which we are being overdone. Go where you like, in every garden large and small, in flower beds and in greenhouse, masses of flaming scarlet dazzle the eye, and it is a great relief to turn for a little to more quiet colours. The potting material for the different species of Columbine should be turfy loam, with a little leaf mould added. The plants must also be syringed frequently to keep red spider in check. See that no plants suffer for want of water. Tie and train all climbers about once in a week or ten days.—J. Douglas.

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Leeds.—June 9th, 10th, and 11th. Mr. J. Birkbeck, Delph Lane, Woodhouse, Leeds, Sec.
Burton-upon-Trent.—June 16th. Mr. Wm. Shave, Bond Street, Sec.
Jersey.—Rosea June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon.-Sec.
York.—June 16th, 17th, and 18th. Mr. Jno. Wilson, 13, New Street, York, Sec.
Glasgow.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
Exeter (Rose Show).—June 18th. Mr. J. N. Gray, Queen Street Chambers, Hon.-Sec.
Fareham.—June 23rd. Mr. H. Smith, Sec.
Stowmarket.—June 24th and 25th. Mr. S. Prentice, Hon.-Sec.
Reigate (Rose).—June 26th. Bushby Britten, Esq., Hon.-Sec.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Hothouse Grapes, &c. (*E. Lowther*).—Write to Messrs. Webber & Co., Centre Avenue, Covent Garden Market.

Variety of Oak Gall (*A. R., Bromley*).—The twig of Oak sent is attacked by two kinds of Gall flies, Cynips quercûs pedunculi, *Linnæus*, which makes currant-like galls, and C. quercûs ramuli, which makes woolly galls. They are not common.—I. O. W.

Fly on Gooseberry Trees (*J. C.*).—The fly sent is one of the Saw flies Nematia ribis or ventricosus, the larvæ of which will very shortly be hatched from the eggs laid on the under side of the leaf. They are very voracious, and if not hand-picked and destroyed will defoliate your trees.—I. O. W.

Strawberries Unfruitful (*R. B. N.*).—The plants which have not any flowers, and consequently no fruit, we should not allow to cumber the ground, but at once clear them away, and crop the ground with vegetables. A new plantation of Strawberries should be made so early in July as you can obtain rooted runners, which may be secured earlier by pegging the runners, or they may be laid into small pots, and when well rooted detached and planted-out. Runners from fruitful plants only ought to be taken.

Pruning Laurels (*H. G. M.*).—As they were partly pruned in January you may, now they are breaking freely, cut them in to the required form, but those cut in January will take the lead, the others starting away also freely at a later period. Sweet Baya may also now be pruned, but it is better done a month earlier, as the growths being made late do not ripen well, and are liable in a severe winter to have the unripened wood injured.

Fly—Seakale Planting (*E. M. P.*).—The fly is not injurious. In planting Sea-kale for blanching by pots and litter, &c., it is usual to plant three plants in a triangle, so that they may give a good supply of heads from a pot; but though we practise this, and advise it, there can be no doubt single plants will from the greater distance give larger heads, and will in time have as many crowns as it is desirable to have shooting up under one pot. It is easier, however, to thin than to produce, besides having to wait two or three years for that which may by planting three plants be had from the first year after planting—viz., a maximum of produce for the means employed.

Grapes for Market—Planting Vines (*E. P. N.*).—The most profitable Grapes are those which are ripened at a time when they fetch the highest prices, and this is in spring after the old Grapes are gone out, when they may bring in May and early June 5*s.* per pound. To have them in August, September, and October or November is to compete with foreign produce and home easily-cultivated products, the prices then being at a minimum, and to have late Grapes keeping in good condition up to April is perhaps the most profitable of all. You will need to bear in mind the difficulty and increased cost of production of Grapes ripened in May, and late ones ripened in August to hang until March over those grown in summer mainly by natural heat. We give you the Vines that will answer the several purposes—viz., for early forcing—Black Hamburgh, Foster's Seedling, Mill Hill Hamburgh, Bucklaud Sweetwater, White Frontignan. Summer—Black Prince, Duke of Buccleuch, Frankenthal, Black Hamburgh, Madresfield Court, and Buckland Sweetwater. These will succeed with very moderate artificial heat. Late—Muscat of Alexandria and Madresfield Court. Those may be useful if you wish to have some to cut in autumn, they not being good hangers after November; and for very late—Alicante, Barbarossa, Lady Downe's Seedling, and Mrs. Pince. Whatever class of Vines you have, arrange to have them planted inside, the front wall having openings 2 feet wide, and 14-inch pillars between of masonry for the support of the front. Your house will accommodate eight Vines at 45 inches apart, and, considering its narrowness, we think you will succeed best by growing summer Grapes. Planting is best done in spring when the Vines are beginning to grow.

Melons not Setting (*Subscriber*).—Probably a very free growth, induced by a close and moist atmosphere with deficient bottom heat. The best aids to setting we know are a brisk bottom heat, the shoots not overcrowded, free ventilation, a moist state of the soil, but a dry surface and atmosphere, and a little air at night so as to prevent moisture condensing upon the flowers. Impregnate the flowers upon a fine day when a sufficient number are expanded, and stop the shoot of each at the same time one joint beyond the fruit. Melons have set remarkably well with us this season.

Removing the Leaves of Hyacinths (*H. G. M.*).—The leaves ought not to have been removed until they had begun to turn yellow. By cutting them off short whilst in a green state the growth will be stayed, and the ripening of the future growths impaired.

Pruning Chimonanthes fragrans (*Idem*).—Cut it in after flowering, removing the old and bare wood, but preserving the young parts, or prune in as to originate them early in the season, so that the wood resulting may well ripened.

Lavender Culture (*S. E.*).—It is prepagated by slips or cuttings of large pieces inserted in the ground early in April or in September, inserting them up to the growing parts, and firmly, in light soil in rows 2 feet apart, and the slips 1 foot asunder, watering it dry weather prevail. At the end of June or early July the flowers will be ready for cutting for drying or distilling, and after the removal of the flowers the plants should be cut-in, leaving about an inch of the present year's growth, from which will be produced the growth giving the crop of flowers the season following.

Wild Celery.—"The Droitwich Canal, which for the six miles of its length is slightly salt, is bordered by Celery, which has exactly the appearance and smell of the cultivated plant. If plants were removed from its banks and cared for in a garden, may they be safely used for culinary purposes?" It is the Smallage, or Wild Celery, Apium graveolens. If planted in a garden and blanched it might, perhaps, be eaten without injuring the eater, for it is the parent of our garden Celery, but it is so strong-smelling, acrid, and fatal if eaten when at all green that no one should venture to eat it. Celery plants and Celery seed are cheap enough.

Pelargonium Flower (*Jack*).—The markings, white streaked with crimson, are rather novel.

Pansy Seedling (*C. R. S.*).—The petals are the darkest we have seen being almost black.

Caterpillars on Gooseberry Trees (*W. B. H.*).—Dust the leaves thoroughly with white hellebore powder. Next day syringe them until all the powder is washed off. If any caterpillars survive, dust again and syringe as before.

Pear Leaves Black-blotched (*E. D. L.*).—The root action is deficient. Water copiously with weak tepid manure water, mulch over the roots, and keep the mulching on throughout the summer.

Hollies Unfruitful (*J. W. S.*).—The sprays sent are from a barren tree. The flowers have stamens but no pistils, therefore cannot form fruit. Some trees are always barren, and others, as in other fruit trees, occasionally bear fruit. By no treatment can such flowers as those you enclosed be made to produce berries.—G. R. Allis.

Double Gorse (*G. T.*).—The simplest way to raise plants in quantity is to put in slips or cuttings closely in rows in the autumn. A sandy border under a north wall is the best site. The cuttings may be 6 inches in length, and be put in firmly to a depth of 4 inches. They will also strike at the present time if put in sandy soil under handlights and duly shaded.

Vines Scalded (*R. A. W.*).—Your healthy Vines have sustained a chill and a scald. A low night temperature has caused a condensation of moisture on the foliage, and a close atmosphere in the early morning has completed the mischief, but it is not serious. The minimum temperature should not be below 55°, and 60° would be better, with the top lights opened an inch all night, increasing the ventilation at 6 A.M. in bright weather, or as soon as the thermometer has risen 5°.

Geranium for Exposed Situation (*N. B.*).—Lucius will probably suit you; but the situation is about as unfavourable as can well be. Vesuvius in such position we have found useful.

Vine Canes Splitting (*Thos. Nicol*).—The splitting of the bark is nothing unusual, and you have nothing to fear on that account, as it is no more than the rupture of the outer bark, owing to the expansion or growth of the canes. The white spots or dots are as you presume a good sign, the whole appearance as described by you being evidence vigorous health.

Hardy Plants for Cut Flowers (*G.*).—Amaryllis Athamesca, Antirrhinum majus vara., Astragalus vaginatus, Azalea procumbens, Bambusa japonica variegata for its foliage, Campanula aggregata, C. lactiflora, C. macrantha, C. rapunculoides; Cardamine pratensis flore-pleno, Centaurea phrygia, Cheiranthus longifolius, C. Cheiri (Wallflower in variety), Convallaria majalis vars., Coreopsis auriculata, Cyclamen coum, C. hederæfolium, Dactylis glomerata variegata, for foliage; Delphinium alopecuroides, D. Belladonna, D. Keteleeri, D. William Pfitzer, Dianthus cruentus, D. floribundus, D. fragrans; Pinks, Carnations, Picotees in variety, Dictamnus fraxinella, Dielytra spectabilis, Epimedium pinnatum elegans, Epilobium rosmarinifolium, Erianthus Ravennæ (Grass), Hemerocallis flava, Hyacinthus amethystinus, Hypericum calycinum, Iberis Garrexiana, Iris germanica vars., I. Kæmpferi vars., Lathyrus grandiflorus, Leucojum vernum; Lilium auratum, candidum, lancifolium; Lobelia fulgens St. Clair, Lychnis diurna flore-plene, L. viscaria flore-pleno, Myosotis dissitiflora, Narcissus conspicuus, N. Ajax, N. angustifolius, N. incomparabilis, N. juncifolius, N. poeticus and var. flore pleno, Nepeta Musaini, Pæonia in variety, Pentstemon in variety, Phlox in variety, Primula acaulis vars., P. cortusoides amœna, P. japonica, Pyrethrum double vara., Ranunculus amplexicaulis, Rhododendron hirsutum, Rosea, Saponaria caucasica flore-pleno, Saxifraga longifolia, S. palmata, Sisyrinchium odoratissimum, Spiræa filipendula plena, S. japonica, S. palmata; Statice latifolia, Stipa pennata (Grass), Gynerium argenteus (Grass), Thalictrum minus, very nicely divided, not unlike Maiden-hair Fern; Trollius europæus, T. napellifolius, Veronica prostrata, and Violets in variety. Those are all hardy herbaceous plants. *Annuals* are:—*Abronia umbellata, *Ageratum coeruleum, Alyssum maritimum, *Aster Victoria vars., Calliopsis Burridgi, Centaurea cyanus major and minor, Chrysanthemum Dunnetti flore-plene and double golden variety, Helichrysum var., for dried flowers for winter bouquets; *Marigold, French (some object to the smell), Mignonette, Nasturtium Tom Thumb vars., Sweet Peas, *Phlox Drummondi vars., *Scabious, dwarf double; Senecio elegans, double var.; *Ten-week Stock vars., and Sweet Sultan vars. Those marked with an asterisk require to be treated as half-hardy annuals. Grasses a few are—Agrostis argentea, A. nebulosa, Anthoxanthum gracile, Briza geniculata, B. maxima, Brizopyrum siculum, Eragrostis elegans, Paspalum elegans, Pennisetum setosum, Piptatherum Thomasi. *Ferns*—Adiantum pedatum, Asplenium Adiantum-nigrum, Athyrium Filix-fœmina vars. Applebyanum, plumosum; Cystopteria fragilis, Lastrea dilatata cristata, Polypodiums, Dryopteria, Phegopteris vulgare, Polystichum angulare cristatum, gracile, and Grayi.

Insects on Pinus Pinsapo (*R.*).—The mass of insects found in thousands smothering the "branches inside" your Pinsapo are the largest species of Aphidæ (Aphis Laricis). They must be attacked by the usual modes of destroying plant lice.—I. O. W.

Insects on Pear Leaves (*Idem*).—The brown objects found on your Pear leaves are the moveable cylindrical cases formed and inhabited by the caterpillars of a little moth (Coleophora Hemerobiella). We know no other remedy than hand-picking.—I. O. W.

Names of Fruits (*B. S. Williams*).—Adams' Pearmain. (*M. Webber & Co*).—We are sorry we cannot name the French Apple you have sent.

Names of Plants (*K. T.*).—1, Ranunculus parnassifolius; 2, Orobus vernus. (*Ten-years Subscriber*).—1, Euphorbia Paralias, *L.*; 2, A Willow (Salix sp.). (*G. Floyd*).—Sparmannia africana. (*M. M. B.*).—Mesembryanthemum sp. (*O. P.*).—Ligustrum lucidum. (*W. Heard*).—Apparently rightly named, and a very fine specimen.

POULTRY, BEE, AND PIGEON CHRONICLE.

SHOW MANAGEMENT AND REPORTS.

The exhibition season is once more upon us. The two or three months of rest which always come early in the year are over, and the list of forthcoming shows promises us a merrier time than ever. The Crystal Palace rival has already arranged the dates for its exhibition, and the fixtures for the three last months of the year promise us an unusually lively season. To those shows we look forward with much pleasure, for we are assured that it is the early shows only which will be inconvenienced by the past disastrous chicken-tide, and that the later shows will be as strong and hot as ever. The exhibitions, however, for the next three months are many, and forewarned being forearmed, we will at once say a few words on matters connected with our shows. We will begin at the beginning and go through some of the various points in rotation.

First, then, about labels. They now range in size from pieces of linen as large as cabbage leaves to atoms of parchment. We had a label sent us the other day from Devonshire on which literally there was not room for the return address. The very large labels are as ridiculous as very small strips. We should like to see uniform labels used everywhere—labels of strong make, useful size, double-holed for tying the strings, and, above all, the direction to the show very clearly printed on them, with the name of the county printed as well in every case. Then, the labels should be sent in good time, at least four or five days before the show. Many exhibitors write from their places of business, and may be miles from their poultry-yards, and consequently they have to forward to their managers the labels. But as it is they often never come to hand till the last morning, when it is frequently too late to send them on, and all kinds of unpleasant mistakes are the results.

The detention of the birds on Sundays we have before alluded to, as, too, we have to the great importance in announcing who the judges are to be. We have not alone done this, other journals have also urged the importance of it, and other pens have taken the matter up, but without, we fear, much real success, for among all the goodly lists of shows-to-be, not a tithe of them state who are to award the prizes. We cannot conceive how the committees can be so short-sighted, for we are certain no exhibition can be a real success where the judges' names are not announced. We shall not be content either with merely knowing who they are to be, we shall not rest quiet until we may also know who are to judge the different classes.

Then about catalogues. This really is a great grievance, and a growing one. It is one of the few things in the poultry world that has not changed in some way for the better of late years. Often and often we have sent for a catalogue and the stamps have been lost altogether; anyhow, the catalogue has never come to hand, and we certainly cannot name a score of shows last season where we had the catalogues on the proper days, and often, especially from the north, when they did come they came without a prize list of any sort, and were consequently perfectly useless. Now, Secretaries, do improve on this! do try and let this coming season be marked for an improvement in this respect. Charge two or three pennies more for a catalogue if you like, to enable some one person being paid to see they do leave by the first day's post.

Next, for the flooring of the pens. We sometimes see sawdust, which is simply destruction; and sometimes sand, which is quite useless, for it only soils the plumage of the birds and gives no exercise. At the Palace we see nice shingly grit, but even this wants a layer of chaff on the top. Let us always have some coarse clean gravel, and then a good sprinkling of chaff over that. This put in fresh every morning would enable a bird to go home as clean as when it came, and very little worse for its incarceration; and then, too, every day a leaf or two of lettuce or some vegetable food should be given. It is surprising how the birds look forward to it, and the good it does them. At Oxford they give this green food, and it is an acknowledged fact that the birds go back from that Show in most brilliant condition.

Double baskets, too, we must say a word about. We call them "The 1874 Success," and greatly to be thanked is that gentleman who untiringly urged the introduction of the system, and in so many cases won the day. Go on with it, committeemen! Frequently, especially at single-bird shows, allowing the use of double baskets will double your entries. So do not forget, on any account, to add that as a new rule to your schedules. We had to do with an exhibition lately which sanctioned this arrangement, and it greatly lessened the work of the attendants, which is an important point.

A word also on the treatment of birds on their arrival. It is imperative that the water tins should not be full when the birds first come, as they are so often—filled, of course, in pure ignorance by some attendant who knows about as much of an exhibition Dorking as he does concerning an exhibition elephant. Sooner let them be empty than full, for the birds as soon as ever placed in the pens drink up the water, and black combs and swollen crops are the result. Let, then, the tins be a quarter, or at the most a third full, and let the birds have rather a sparing feed of well-mixed ground oats or sweet barleymeal. There have been during past two or three seasons so many disastrous results from injudicious feeding on the arrival of the birds at shows, that we do hope this matter is now generally better understood.

As regards allowing exhibitors or their managers to pen their own birds we would rather not say much. We know it is delicate ground, but we abstain from treading upon it, knowing it will be a perfect impossibility to please all. Perhaps on the whole we think there is not any harm in allowing it, provided there be plenty of committeemen or authorised people to go round as well and see the birds penned; but whether shows do it or not, all we do say is, Let one and all be treated alike. Let us hear nothing of Mr. Amicus being let in and Mr. Hostis being kept out. That proceeding will never do, and naturally makes the locked-out ones and others feel suspicious.

And then, lastly, we come to the reports of poultry and Pigeon exhibitions. Captain Talbot wrote a letter on this subject a few weeks ago, and sent it whirling round the poultry journals, but we do not believe that one line has ever been written in reply. This must have arisen either from the poultry world objecting to its being so much of a circular; or else they are, and this we think much the most probable, resting on their oars, thankful beyond expression for the copious and able criticisms they are now enjoying. There was doubtless an immense deal of truth in all Captain Talbot wrote, but we are quite sure that it would be an impossibility to find anyone to report systematically on our poultry and Pigeon shows who was quite disinterested. We could not name half a dozen competent people who would thus be able and willing to undertake the work. There are very few men that attend our shows but do so either because of their own birds or those of friends. We believe ourselves all the reports are sufficiently near the truth for all practical purposes, for if we read the various reports of shows in the different journals they agree in the main points. As a gentleman told us the other day, take them *cum grano salis* and they will do very well. If this Journal, or any other one, was often wrong in its criticisms, and appeared to treat some exhibitors more favourably than others, the result would be ruin, and so we think that critical comments on birds and show management must be square in the long run.

If we were to have our judges write also the reports systematically—we say systematically because no doubt some judges do at times send notes on the shows they award the prizes at, and these notes are duly prized and valued, for most attentive readers of the papers can "twig" the different writers' articles and notes though signed with a *nom de plume*. Well, we say, if the judges were also the reporters we might perhaps see more careless judging. The criticisms to which their awards are subjected by one and another have no doubt a wholesome if not a pleasant effect on them, and we should be sorry to see this relaxed in any way. Captain Talbot suggested that the reporters when exhibitors should sign their names. This is not a bad idea, but even this is of no real use, as very few are qualified to form a correct opinion about every breed at a large show, and where their knowledge fails they generally get some friend who is up in the breed to lend a helping opinion. No, we think for the most part the present reporting system is very good, and cannot well be improved upon. We recommend, however, exhibitors and others not to adopt an hasty conclusion as to the authorship of different reports, for this may bring trouble upon them. We ourselves know of one gentleman who happened to hear that a certain party was at times wont to send notes on shows to this very Journal. Well, this gentleman, whom we will call Mr. A, met the other party, whom we will term Mr. B, at three or four shows. Mr. B was himself an exhibitor at those shows, and on each occasion won the first prize or cup in severe competition, and his pens were consequently lauded, not only in this Journal but in others. Mr. A having seen Mr. B at the shows immediately put two and two together and tried to make five, for he set about the report that Mr. B had written the reports himself, and eulogised so highly his own specimens, when as it happened Mr. B. had never written one single word of the said reports.—W.

Bramley Show of Poultry, &c.—We have received the schedule of the fourth annual Show to be held at Bramley in Yorkshire. In all sections the prizes are 15*s.*, 7*s.* 6*d.*, and 2*s.* 6*d.* For poultry there are twenty-two classes, one silver cup and a water fountain being offered as extras. In Pigeons are twenty-one classes with five extras—viz., a cup as one, a pair of Pigeons as another, a Batty's water fountain and bath combined, one silver medal, and a Batty's self-feeding hopper—useful articles, we are glad to see, in lieu of the ever-recurring cup. In Rabbits there are eight classes, with an extra 10*s.* for Lops and two boxes for the other breeds. Cage Birds having also eight classes, with a six-holed breeding cage, and a cage cathedral-shape as extras. The schedule is a good one and we commend it to the notice of our readers. The Judges are (as in all cases they should be) announced on the schedule. They are Mr. E. Hutton and Mr. W. Cannan.

BATH AND WEST OF ENGLAND POULTRY SHOW.

We only had one spare day this week, and we wanted to spend that day in a proper sort of manner. We had a long debate where we should go to; for we wanted to see this Society's meeting, we wanted to see the dogs at the Palace, and we wanted to see the horses at Islington—in fact we wanted to do everything. It was an *embarras de richesse*, and we did not know which promised the best. Mr. Goodwin and his troupe we knew; we met them many years ago at Salisbury, and we have since visited their leviathan meetings annually. We have heard the cocks crow at Taunton, and Guildford, and Plymouth, and goodness knows where besides, for this Society is very erratic in its movements, and strides from Somersetshire to Surrey in one bound.

> "With thymey breath and bees that hum,
> Across the years it seems to come."

But old loves are the true loves, and so to the old love we adhered, and Croydon was the chosen one out of the three dainty dishes. And when we got there—why, it did seem like old times. We could almost have fancied that the whole concern had been packed up last June on the Clifton downs, labelled "This side up with care," consigned to Croydon, and there unpacked again. It all seemed identical. The tents, the flags, the stalls, the very people's faces all seemed the same, and everything looked if possible brighter than ever. We may safely say to this Society—

> "Where'er you go, where'er you pass,
> There comes a gladness o'er the grass."

Yes, we were indeed glad we chose Croydon. We should have been sorry to have neglected this old love in its time of mirth. It was truly pleasant to walk among the old familiar things. We saw ploughs and carts painted as bright as ever. We saw cucumber-cutters, pea-shellers, potato-mashers, all working away as if they had never stopped since last year. We saw what appeared to us the same imitation-marble mantel-pieces, grouped as if they were going to have afternoon tea together, with impossible-looking Ferns and fruits growing upon them, vainly trying to look natural. We threaded our way past bright pink pigs and sleek Alderney cattle, past cattle foods and poultry condiments. We walked through conservatories and greenhouses. We gazed at marvellous wirework manufactures, and saw turnip-cutters working away like steam-engines. It was, however, like going from London to Cambridge to get to Oxford, such a way round it seemed; but at last we heard the welcome sounds, and the poultry tent was close at hand. As we entered it, and gave one preliminary peep round, we felt we should take even a still greater interest in this our favourite department had we not remembered that the "Sunday detention" was here in force. But we have alluded to that before in these pages concerning this Society, and will do so no more, hoping that before another year comes round someone will try and arrange it differently, for—and we speak advisedly—we can name no less than seven former patrons of this Society's poultry shows who have not exhibited this year because they will not countenance this Sunday business. We must say a word, however, to condemn the soft food upon which the poultry were fed. It more resembled barley chaff than barley meal, and the birds did not care for it at all. Then, too, we walked from pen to pen among the Pigeons, and nearly every water tin was empty and most of them full of dirt. Such things should not be at a meeting of such fair fame as this Society enjoys. It was a long while before all the prize cards were up. When we left at 4 P.M. on the first day some of them were still not put up; and considering the birds—poor creatures!—had to be in on Saturday, there really was no excuse. The Judges were Messrs. Tegetmeier and Harrison Weir, and we saw ourselves the great trouble they took over the awards, and if they were not all quite satisfactory we must remember the immense labour they had, for there were 530 pens, and those mostly above the ordinary quality. Most certainly the Committee, when they saw the large number of entries they had, should have engaged the services of another Judge to help, for it is as unfair to the Judge as to the exhibitors for one man to have so much work to do in a short time.

Spanish came first on the list, and the two classes brought thirty-seven pens. The quality was splendid, most of the Bristol fanciers exhibiting. The cup-winner was a grand cock,

and so was the second-prize bird. 17 (Mills) a most beautiful young bird, and worthy of a notice certainly. The hens were also a good lot. We liked the second as well as the cup pair, still there was not much wrong. 33 (Woodhouse) a capital pair, and so were 28 (Chilcott).

Dorkings again made grand classes, all the varieties mustering well. The cup Coloured cock was a beauty; he was immense in size, and good all round. The second, too, was a grand bird; one toe was a shade swollen, but he deserved his place, and was a good second. 52 (Rice) a good bird. 48 (Cork) large and nice in shape. In hens the cup pair were superb in condition and of huge size, though hardly matching in colour. Second were also in grand order, and a splendid pair of hens. 72 (Hodges) a nice pair. 63 (Darby) fine well-shaped birds, and of good colour, but smaller than the winners. Silver-Greys were two small but good classes. Mr. Cresswell brought a fine team, and should have had, we fancied, all four prizes, for we preferred his 75 to the second-prize bird, the latter having a swollen toe. The Silver hens were very fine and in good condition. White Dorking cocks were poor; they were so very yellow, or else the first cock was large, and good in comb and tail. The first hens were very fine and well shown. The second prize went to Cuckoos, a prettily-marked pen. 91 (Darby) had one splendid White hen, but her companion was not equal to her. 96 (Putney) a neat pair of Cuckoos.

Cochins came next. There were nineteen Buff cocks. The first was in beautiful condition and nice in colour, but rather small. The second we did not care for so much. 97 (Alsopp) a fair bird. 104 (Darby) a grandly shaped and feathered cock, but too light. 102 (Harris) disqualified for broken tail feathers. The Judge assured us he always meant to disqualify for broken tail feathers in Cochins. We certainly think at this time of year especially that broken tails should have the benefit of the doubt, for they are more probably the result of being confined in a breeding pen than of being designedly tampered with. In this case we have seen the bird winning on many former occasions with a splendid tail; but the Judge took him as he was and disqualified him. The hens were not a good lot. The first were rather destitute of leg feather, and rather white in the leg. Second a fair pair. Partridge cocks were only middling. The winner had a very full tail, but was in nice order. Second a good bird. There was only one pair of hens, and (*miserabile dictu!*) these also had left their tails behind them, and were disqualified. We could not help smiling at this, for their tails had disappeared entirely, and a great many back feathers also, and this is not the way Cochin hens are generally "faked-up." White cocks were good. The winner was the only white bird in the class; he had splendid hackles and fine carriage. The second was very hocked and very yellow. We much preferred 135 (C. Bloodworth). 143 (Burnell) the yellowest cockerel we ever saw. The winning hens were large and good in shape, but rather bad in comb, still a good first. For second we should have gone to 147 (Boissier) or 148 (Warde); the latter pen contained one fine hen.

Dark *Brahmas* made two large classes. The first was in lovely condition and well first. We hope by seeing Mr. Lingwood's name again in the catalogue he has recovered from his late illness. Second a small but pretty bird. 149 and 150 (L. Wright), two nice cockerels, but they wanted a little more leg feather; they were well shown and in splendid condition for the season. There were one or two pens in this class we liked as well as the second-prize bird. The first hens were well marked and nicely feathered, as too were the second-prize pen. Light Brahmas were very fair in quality and good in quantity. The first was well placed. 186 (Savile), we liked better than second. One or two more birds should have been highly commended in our opinion. 178 (Long), good; 180 (Boissier), ditto. In hens one of the first-prize pair was very grand, large, and heavily feathered; but her companion matched so badly that we should have been inclined to put the second-prize pair over their heads. 194 (Haywood), a lovely pair of early pullets, the earliest we have yet seen this season.

Game were very good, and most of the best yards put in an appearance. In Brown-breasted Red cocks we thought the best bird was left out—viz., 233 (Matthew). The second-prize bird was not nearly equal to him, and the first looked suspiciously round in the back. The first Duckwing cock was an easy win. 248 (Winwood), out of condition. The first Duckwing hen was a beauty.

Hamburghs mustered pretty well. The winning Gold cocks (Spangled), were good. In hens, 270 (Beldon), were in best feather, and we should have liked to have seen them higher. The second Silver-spangled cock must have been a mistake, it had such bad ears, its neighbour, 273 (Beldon), being much superior to it. The first-prize bird had splendid wings, and was well first. The Silver-spangled hens did not match well. A grand pair could be made by taking one from each pen. The Golden-pencilled cocks were good. The second was in best condition. In the Golden-pencilled hens one was much superior to the other. The second were a good pen. In Silver cocks Mr. Beldon walked his winner in, and so he did his pair of hens Second hens a neat pair.

Polands were two grand classes. We were glad to see so many good White-crested Blacks. The first in both classes went to grand pens of Silvers, and second to Blacks. 300 (Bloodworth), a good Silver cock.

Houdans were good. The first cock a beauty of good colour and fine carriage. 321 (Dring), a splendid fellow, and was, we believe, first at Birmingham, but here unnoticed. The Houdan hens were good and in fine order. *Crêves* were splendid. The first cock very good all round. Second a nice bird, but we almost preferred 333 (Fowler). The first Crêve hens were very fine, but we liked 341 (Dring) next best to them; had they more crest they would have been higher we conclude, for they were very large and good.

The Variety classes were large and varied. First in cock went to a fine La Flèche. Second to a Black Indian Game in grand condition. 352 (Beldon), a good Black Hamburgh. 348 (Fowler), a pretty Leghorn. White Minorcas won first in hens, a fine pair but looking very antique, and second went to Blacks Minorcas. 364 (Kitchin), nice Brown Leghorns.

Aylesbury *Ducks* were only three pens in number, but the winners were good. Rouens were rather out of feather, still they were well judged. The Variety class only had three pens. in it also. *Turkeys* were good, the winners really fine birds. Mr. Fowler's winning *Geese* looked as grand as ever, and would have won in any company.

Bantams were good, but there were only two pens of Sebrights: wherever was Mr. Leno? Blacks were good and numerous. Game were all huddled into one mixed class, in which it must be impossible to pick out the winners to give satisfaction to all.

Pigeons mustered about one hundred pens. Mr. Fulton and Mr. Cresswell came to the front well. The first *Carrier* cock was a grand Black. In hens the winners were both Duns, two capital hens they were too. In *Pouters* there were but four entries, and Mr. Fulton owned the lot. *Runts* were good; very fine silver Duns first, and nice Blues second. In *Dragoons* a Blue and Dun were first and second respectively. *Fantails* were a charming class, the winners lovely. 469 (Dickinson), a very pretty pair of Yellows. *Archangels* were middling. We have seen the first-prize pair before, and in better condition then than now. *Turbits* were beautiful, the first-prize pen perfect gems. In *Tumblers* again Mr. Fulton walked his two pairs over, for there was nothing to come near them. *Nuns* and *Owls* were only fair. The winning *Jacobins* good; the first a very beautiful pair of Reds. A pretty collection of fancy Pigeons in the Variety class completed this department, and on looking back on past shows we do not hesitate to say that on the whole the show of poultry and Pigeons this year has surpassed those held for the last five or six seasons. The improvement too being especially observable in the useful classes.

The Bath and West of England has never in my recollection been in Bath, though it is to come, and also with a like delightful contradictory spirit has moved from the west, for it is held this year at Croydon, which means London, and London we all know is nearer the east than the west. But that is not all its feats; it has jumped over the back of "the Hants and Berks," which I hope, however, will not "duck and go under," for the Hants and Berks, though smaller than the Bath and West of England, is still beautiful for its size. But though I wonder a little to find my old friend B. & W. gone to London or almost (perhaps it had better have gone nearer or kept further away, for the sake of its exchequer), still it is the pleasantest of all shows. Each year I think so, each year I find it to be so. The first week in June is the very bloom and perfection of all the summer—the early, early summer time, when the season has come in its beauty, and as yet there has been no in-gathering, not even of a blade of grass, no scythe has as yet invaded the grassy sea, which this lovely breezy 1st of June is seen by me gently moving in the sunlight. The waves of shadow are going over the grassy slopes; all is early summer—not a tinge of autumn, nothing finished, nothing done with; all so new, and green, and clean. Such were some of my thoughts as I walked from Waddon station to the Show yard, and albeit though my old friend B. & W. has gone to London this year for the season (oh! gay B. & W.!), yet it has pitched its tents in a most perfect bit of country. That winding lane from Waddon station is a perfect country lane, and the views around genuine Surrey views—that is, open, and clear, and pleasant, with a healthy, sweet-tasting air coming to one's lips, for I hold we can taste the air. All at Waddon village is "truly rural;" though from what I see those testing words of the policeman to the drunkard would be pronounced by many not "truly rural" but "tural lural." Oh! why will men drink without eating, and in hot weather too?

Well, I am at the Show; click go the turnstiles, and I am in. Whiz is going, as usual, the machinery in motion, making one hotter than ever. There is the horse ring; there the arts' department; and then my old friend of many years' standing, the

poultry tent, with its many little flags. I enter, and find plenty of room, for no one is there save two policemen—lucky men, standing in the cool opening at either end. I find only about a hundred pens of Pigeons, and some of them even empty. I do not wonder at the smallness of the Show. The poor Pigeons at this season have a please-let me-go-home-to-our-lofts look. They are thinking of those eggs they feel they ought to be on, or those young birds now under the care of somebody else. Winter time is the show time for Pigeons; they are then like young folks "just come out" looking out for mates—not married yet; but now in June domestic life has come with its cares, and Mrs. Ponter and Mrs. Jacobin do not look as sprightly as they did last January 6th. They are no longer Miss Ponter and Miss Jacobin, and look, as we say in Wiltshire, "very much married indeed." But a truce to all reflections. Let me begin at the beginning, and go through the Pigeon pens.

First I must observe of these Pigeon pens that they are a great deal too highly placed. Being put on the top of lofty fowl pens it is not possible to see the birds without tipping on one's toes and straining one's neck; and if I had to do it—and I am a five-foot-ten man—how much worse for the short men! and I heard ladies bitterly complaining; for though swans can stretch their necks, human beings cannot, though I saw some swan-like necks doing their best to add an inch to them.

Carrier cocks (any colour)—First (431), a Black. Eye good, beak not down, wattle good, but in carriage scarcely equal to its Dun neighbour (430), highly commended, both owned by Mr. Fulton. By the way, I see my Scotch friend "Bob" has again changed his residence, and now dates from "*Doo* Lodge, Brockley." Let all readers, specially Americans, understand that does not mean that he will "*do*" any of his customers, for an honester man I know not. This in passing. Second-prize an uncommon nice Dun cock (436), and from Bath, too, I see. He is a bird fully deserving his place. (435), highly commended, a beautiful-plumaged bird. (430), Shoulders well out, statue-like look. I went back twice to look at him. Carrier hens (any colour).—First (440), a capital rich Duo of Mr. Maynard's, a long way the best. Second (439), small rather, but trim and pretty. (444), commended, a promising young hen.

Pouter cocks (any colour)—Here Mr. Fulton had no competitors; two prizes, two birds. First a good Yellow, second a Blue, and fine. As with Pouter cocks so with the hens, two prizes, two birds. First, Blue, rather heavily flagged; second a White, utterly out of show. Both Mr. Fulton's.

Runts—These were for Runts quite numerous, for I remember when only two pens were shown at Birmingham, and here were five. First (453), a wonderfully fine pen of Silvers. The rest good, every one.

Dragoons (any colour).—First (460), a nicely-matching pair of Blues, and not too heavy. Second (463), Duns; these were simply young Carriers, and will be shown as such presently. They were unmistakeably Carriers, with not a Dragoon look about them; hen a very nice young Carrier indeed. The Dragoons mustered ten pens. "How those birds have come up!" said an old fancier to me; "in my young days nobody thought anything of them."

Fantails.—First and second Whites, Mr. Maynard. 469, highly commended, a nice but not well-matched pair of Yellows. If the fair owner can but procure a better mate for her pretty little hen she will rise beyond highly commended or even very highly commended, but the cock bird is coarse, and has too very white feathers in his tail. I venture to hope that Miss Dickinson will persevere with this very pretty colour of a very pretty variety. *Trumpeters.*—First, grand Blacks. Second, good Mottles. 476, highly commended. The right type of bird, Mr. Vander Meersch, but too light in colour.

Barbs—A capital class—one of the very best in the Show. Out of the eight pens five were noticed. Blacks won, but almost every pen was deserving. Mr. Maynard was very fortunate with his birds, beating even Mr. Fulton.

Archangels.—Seven pens of very equal goodness, the colours very glowing, and the birds well shown, some very tame. I often think if other fanciers took pains and made their pets as tame as Ponter fanciers do theirs, they would often gain a point. Here was an Archangel who played up to me, and showed himself off to every advantage. *Turbits*, save the prize birds not good, many dark feathers where only white ought to be. First (493), black shouldered and good.

Tumblers.—Only three pens, two of head-and-beak *Almonds*, and one of *Agates, Mottles. Nuns.*—Mr. Vander Meersch first with a very nice pair of Blacks; indeed, Blacks as usual won. I turn the corner, and my neck is almost broken now. Oh, those shameful and painfully elevated pens!

Owls.—Three pens of foreign, or as Mr. Huie has it, "the kissable variety." First a truly lovely pen of Whites. Second Whites with black tails, very charming birds. Commended 505, a pretty pair of Blues. Well, friend Huie, they are kissable birds, these foreign Owls; but I could, and do, kiss a Jacobin's dainty white head and short face as lovingly.

And here come the *Jacobins*, another popular variety, as the nine pens here proved. First the only real short-faced birds there; they were good Reds. Second Yellows, a trifle coarse, but hood and chain excellent. There were a pair of Whites unnoticed; why I cannot imagine. Probably the Judge was a taller man than I am and could see them better. The Jacobins as a whole were too large; the size wants reducing, and the beaks shortening, and the heads rounding.

Last of all come Any other distinct variety, eleven pens, and four of them empty. First, Mealy Frillbacks; second, Dark-grizzled Frillbacks—rather odd that this singular variety should be so strongly represented—a highly commended pair of Black Mags, and some pigmy Pouters also highly commended.

Such was the Bath and West of England Show as to Pigeons. Pleasant and cool the tent, excellent the supply of water—a great matter in a summer show; but I do trust that the pens will be placed lower another year.—WILTSHIRE RECTOR.

SPANISH.—*Cock.*—Cup, 1, and 2, E. Jones, Clifton, Bristol. *hc*, E. Jones; H. R. Lingham, Acton. *c*, Miss E. Browne, Chard. *Hens.*—1, Miss E. Browne. 2, E. Jones. *hc*, G. K. Chilcott, Montpellier, Bristol; W. Woodhouse, King's Lynn; P. F. Le Sueur, Grand Vale, Jersey. *c*, Mrs E. Allsopp.

DORKINGS (Coloured).—*Cock.*—Cup and 1, F. Parlett, Galleywood, Chelmsford. 2, T. C. Burnell, Micheldever. *hc*, E. Rice, Sandwich. *c*, P. Crowley, Croydon; C. Cork, New Shoreham. *Hens.*—1, F. Parlett. 2, T. C. Burnell. *hc*, A. Darby, Little Ness, Shrewsbury; J. O. Hodges, Bagshot.

DORKINGS (Silver-Grey)—*Cock.*—1, O. E. Cresswell, Early Wood, Bagshot. 2, F. Cheesman, Ashford. *Hens*—1 and 2, O. E. Cresswell. *c*, T. C. Burnell.

DORKINGS (White or Blue).—*Cock*—1, L. G. W. Stratford, West Malling. 2, J. H. Putney, Dorking. *hc*, O. E. Cresswell; J. Isard, Wokingham. *Hens.*—1, O. E. Cresswell. 2, W. Virgo, Guildford. *hc*, A. Darby, Little Ness, Shrewsbury; A. Darby. *c*, H. H. Young, Shapleton, Dorking; J. H. Putney.

COCHINS (Cinnamon and Buff).—*Cock.*—1, F. Hawkins, New Charlton, Woolwich. 2, Mrs. A. Christy, Edenbridge. *hc*, Mrs. E. Allsopp, Worcester; H. Tomlinson; Capt. T. S. Robin. *Hens.*—1, Capt. T. S. Robin. 2, S. R. Harris.

COCHINS (Brown and Partridge-feathered).—*Cock.*—1, T. W. Anns, Clapham. 2, Mrs. E. Pryor, Welwyn.

COCHINS (White).—*Cock*—1, R. A. Bolsier, Penshurst. 2, T. H. Waterman, Anderton, Devonport. *Hens*—1, A. Darby. 2, J. K. Fowler.

BRAHMAS (Dark)—*Cock*—1, Horace Lingwood, Creeting, Needham Market. *hc*, L. Wright; F. F. Ansdell. *Hens.*—1, F. Lake, Rodmersham, Sittingbourne. 2, T. F. Ansdell, Cowley Mount, St. Helen's. *c*, L. Wright; Rev. J. D. Peake.

BRAHMAS (Light)—*Cock.*—1, Horace Lingwood, Creeting, Needham Market. 2, P. Haines, Palgrave, Diss. *hc*, Capt. W. Savile. *Hen.*—1, Mrs. Peet. 2, Capt. W. Savile. *hc*, E. Haywood, Uckfield; J. Bradshaw, Knowle, Cranleigh.

GAME (Black-breasted Reds).—*Cock.*—1, J. Mason. 2, W. J. Pope, Biggleswade. *hc*, S. Matthew, Stowmarket; E. C. Pope, Falmouth; W. H. Stagg. *c*, T. C. Ledger. *Hen.*—1, S. Matthew. 2, W. J. Pope.

GAME (Brown breasted Reds)—*Cock.*—1, J. Icken. 2, S. Matthew. *hc*, H. E. Martin. *Hen.*—1, S. Matthew. 2, H. E. Martin. *hc*, W. Foster; H. Browne.

GAME (Duckwing and other Greys, Blues, Blacks, and Whites).—*Cock.*—1, W. C. Phillips. 2, D. W. J. Thomas *hc*, G. H. Fitzherbert, Sevenoaks; E. G. Farquharson. *c*, W. L. Blake. *Hen*—Cup D. W. J. Thomas. 2, S. Matthew.

HAMBURGHS (Golden-spangled).—*Cock.*—1, T. Dean, Keighley. 2, H. Belden, Goitstock. *c*, J. Long,. *Hens*—1, W. Driver. 2, T. Dean. *c*, H. Beldon.

HAMBURGHS (Silver-spangled).—*Cock.*—1, S. R. Harris, Cusgarne. 2, F. Hawkins. *hc*, H. Beldon; J. Long. *Hens.*—1, Miss E. Browne. 2, H. Beldon.

HAMBURGHS (Golden-pencilled).—*Cock*—1, W. Driver. 2, H. Beldon. *hc*, J. Long. *Hens.*—1, C. Judson, Rye Lane, Peckham. 2, J. Long. *hc*, T. Reeves.

HAMBURGHS (Silver-pencilled).—*Cock.*—1, H. Beldon. 2, F. Hawkins. *Hens.*—1, H. Beldon. 2, B. Norton, Town Malling.

POLISH.—*Cock.*—1, H. Beldon. 2, T. P. Edwards, Lyndhurst. *hc*, D. Mutton, Brighton. *c*, C. Bloodworth, Cheltenham; G. J. Lenny, Lewes. *Hens.*—1, H. Beldon. 2, T. P. Edwards. *hc*, D. Mutton; C. Bloodworth; C. W. Shepherd.

HOUDANS.—*Cock*—1, W. Dring, Faversham. 2, F. Brewer, Lostwithiel, Cornwall. *Hens*—1, S. W. Thomas, Sketty, Swansea. 2, G. D. Harrison, Datchet. *hc*, Mrs. Schroder. *c*, W. Dring.

CRÈVE-CŒURS.—*Cock*—1, F. Lake. 2, Mrs. A. Christy, Falkoners, Edenbridge. *hc*, J. K. Fowler, Aylesbury; J. J. Malden. *c*, W. Dring; J. J. Malden. *Hens.*—1, J. K. Fowler. 2, J. J. Malden. *c*, F. Lake, Rodmersham, Sittingbourne.

ANY OTHER DISTINCT VARIETY—1, G. De Faye, St. Helier's, Jersey. 2, S. R. Harris. *hc*, H. Beldon; G. R. Smith, Croydon; R. R. Fowler. *c*, J. Croote, jun.; *Hens.*—1, Miss S. H. Northcote. 2, T. G. Ledger, Folkestone. *c*, R. R. Fowler.

DUCKS (White Aylesbury).—1 and *hc*, J. K. Fowler. 2, S. R. Harris.

DUCKS (Rouen).—1 and 2, W. Evans. *hc*, F. Parlett.

DUCKS (Any other variety)—1, R. Wilkinson. 2, G. S. Sainsbury.

TURKEYS—*Cock*—1, F. Warde. 2, H. J. Gunnell. *c*, N. J. Ridley. *Hen.*—1, N. J. Ridley. 2, F. Warde.

GEESE.—1, J. K. Fowler. 2, G. H. Fitzherbert.

BANTAMS (Gold and Silver Sebrights).—1 and 2, Rev. G. F. Hodson.

BANTAMS (Black or White)—1, O. E. Cresswell. 2, E. Cambridge. *hc*, H. Beldon; C. W. Gedney.

BANTAMS (Game).—1, J. Andrews. 2, T. Randall, jun. *hc*, G. Hall.

BANTAMS.—*Cock.*—1, G. Hall. 2, R. Brownlie. *hc*, T. W. Anns; M. V. Sandford.

PIGEONS.

CARRIERS.—*Cock.*—1, R. Fulton, Brockley. 2, J. James, Bath. *hc*, R. Fulton; H. Yardley. *Hens*—1, H. M. Maynard. 2, R. Fulton. *c*, J. James.

POUTERS.—*Cock.*—1 and 2, R. Fulton, Brockley. *Hen*—1 and 2, R. Fulton.

RUNTS.—1, H. Yardley, Birmingham. 2 and *c*, J. S. Price, Finchley.

DRAGOONS.—1, H. Yardley. 2, J. James. *hc*, R. Fulton; W. D. Richardson.

FANTAILS.—1 and 2, H. M. Maynard. *hc*, Miss Dickinson, London.

TRUMPETERS.—1 and 2, R. Fulton *hc* and *c*, A. A. Vander Meersch.

BARBS—1 and 2, H. M. Maynard. *hc*, R. Fulton. *c*, Rev. A. G. Brooke.

ARCHANGELS.—1, E. S. Carew-Gibson, Springfield, Shirley. 2, J. Bowes, Herne Bay. *hc*, O. E. Cresswell. *c*, H. W. Webb.

TURBITS.—1 and *hc*, O. E. Cresswell, Early Wood, Bagshot. 2, R. Fulton.

TUMBLERS.—1 and 2, R. Fulton. *c*, H. Yardley.

NUNS—1, A. A. Vander Meersch, Tooting. 2, T. Homes, Lower Sydenham.

OWLS.—1, R. Fulton. 2, H. W. Webb. *c*, Rev. A. G. Brooke, Shrewsbury.

JACOBINS.—1, O. E. Cresswell. 2, R. Fulton. *c*,—Vander Meersch.

ANY OTHER VARIETY—1, R. Fulton. 2, H. W. Webb, Lower Sydenham. *hc*—Vander Meersch; T. Homes. *c*,—Vander Meersch; J. James.

RUGBY SHOW OF PIGEONS, &c.

THE second annual Show was held at Rugby on Tuesday and Wednesday the 25th and 26th ult., in the Working Man's Club Rooms. The amount of prizes offered was very small, but some extras were offered by tradesmen of the town, and these proved attractive, and though the classes were not numerous the entries were good. Some of the extra prizes were, however, offered in a most curious manner, as for example, a champion prize was competed for by Cage Birds and Pigeons, and this we may here state was won by Mr. Yardley's Almond. Another champion

prize was for Rabbits and Cats, this being won by Mr. Hudson with a yellow-and-white Lop doe.

Pigeons were the first section, Pouters, Tumblers, and Foreign Owls competing together, an Almond being first, an Agate second, and Pouter third. Carriers or Barbs came next, a Black Barb cock standing first an easy winner; a Dun Carrier hen, stylish but short of beak wattle second; and a Dun cock good in beak but short of eye third; a good Black Carrier hen though young being very highly commended. English Owls or Turbits were the next class, a grand Silver Turbit being put first, the second a Silver Owl good all round, and third a Blue Owl cock, very good in head properties but not in the highest order. Dragoons came next, a model Yellow winning first and the two plates of Rugby School, second coming a good Blue, and third a Blue hen of good quality but young, and being a hen not showing well against the cock, while many birds were too long and fleshy in eye. The Homing Antwerps were a grand class, and though the doings of the winners are unknown to us, such were the points and qualities of the winners that under favourable training we are thoroughly satisfied that their doings would be something grand; and we would here remark that to be clean and well marked is no disadvantage in a flying bird, the points which we took as guarantees of worth being the style and carriage of a Carrier combined with a quick eye, intelligent head, short broad flights and tail, and well-developed chest and arm, and if these points can be combined with correctness of colour and marking we say it is a great advantage in either cote or show pen. Many other good birds were noticed. Fantails were a good lot, and an extra third was awarded, the winners being White. In the Variety class a Black Fairy Swallow was first, and Blue Brunswick second, and a Dun Shortface Antwerp third. Mr. Yardley won the point cup for Pigeons.

Rabbits were a capital entry in all classes, the Dutch, for which this locality stands well, outstripping all other classes we have seen of this variety. In Lop-eared, four pens were empty —viz., those of Messrs. Barker, Fell, and Lamb. First was a yellow-and-white doe looking a little worse for wear, but still grand, 23 by 4¾ inches. Second an immense Tortoiseshell doe, good in colour, dewlap, &c., 21 by 4½ inches; the third a fawn-and-white buck, 21½ by 4¾ inches. A grey-and-white doe very good, but low in condition, 21½ by 4½ inches was very highly commended. In Silver-Greys we were told the three winners were all from the same stock. The cup for all, Lop and Dutch excepted, being awarded to Mr. Hudson's buck. In Dutch the above-named gentleman carried off both first and second, a great feat in our opinion. The first was black, and second grey. The third was also black, and there being a great number of very young Rabbits of a promising character, several extra thirds were awarded, as also many other notices. The prevailing fault in this class was a slight unevenness of nose. One of the very best in the show was spoiled by size alone, and was very highly commended. The first in Himalayan was a grand Rabbit. Second good in all but feet. Third very young, had not good ear colour, or it would most decidedly have been higher. In the Variety class a Belgian Hare of rare colour was first; an Angora second, and a Belgian Hare third. The latter was very good in fur, but out of order. In the Selling class a young Fawn Lop, 20½ by 4¾ inches, was first; a Blue Dutch almost equal to the winner in the ordinary class second, and a Belgian Hare third.

There were but four classes for *Cage Birds*, all the Canaries being thrown into one. First was a Variegated Norwich of rare colour of the high-fed class; second a Lizard (Golden), the best backed bird we have seen this year, the only fault, and that but slight, was a little irregularity of marking over the left eye. Extra second was a Clear Jonque Norwich, almost equal to the first for colour, and by the same exhibitor. Third a grand Cinnamon. Extra third a Variegated Mealy Norwich, many other excellent specimens being noticed. For Mules only one prize was offered, and there were four entries, this award going to a Variegated Linnet Mule, which award did not seem to please our Coventry friends, but our experience is between equal birds in Goldfinch and Linnet Mules that the Linnet is most difficult to breed. In the British Birds a Magpie was placed first, she was a grand specimen, the Goldfinches and Linnets proving but poor. In Foreign birds a Grey Parrot was first, and a Green one second. The third also was a Green, and this bird told us that "Polly gets the prizes," but that must be when Polly is a little cleaner and tighter in feather.

Of *Cats* there were two classes, the Long-haired being poor, while in the next class was a Tortoiseshell-and-white, and consequently unnoticed, that might have won easily in the former. The well-known Cat "Lion" took the cup, some other good Cats competing here, the second being White, and third Grey Tabby. An extra prize was awarded to Mr. Geans for his Belgian Hare, but this was not in the schedule.

Turner's pens were used, and the Show well managed in all respects. The rooms though small were light and airy.

PIGEONS.

Pouter, Almond Tumbler, or Foreign Owl.—*Cock or Hen.*—1, Extra, 2, H. Yardley, Birmingham. 3, C. F. Herrieff, Banbury.

Carrier or Barb.—*Cock or Hen.*—1, Extra, 2, and 3, H. Yardley.

English Owl or Turbit.—*Cock or Hen.*—1, H. Yardley. 2, J. Shillingford. 3, J. Barnes.

Dragoon.—*Cock or Hen.*—1, Extra, and 2, R. Woods, Mansfield. 3, H. Yardley.

Homing Antwerp, or Likeliest Bird for Flying Purposes.—*Cock or Hen.*—1, C. F. Herrieff. 2 and 3, W. Bates, Rugby.

Fantail or Jacobin.—*Cock or Hen.*—1 and 3, J. F. Loversidge, Newark. 2, H. Yardley.

Any other Variety.—*Cock or Hen.*—1, H. Yardley. 2, J. Shillingford (Priest). 3, L. Carleton, Rugby (short-faced Silver Dun Antwerp).

CAGE BIRDS.

Canary.—1, R. J. Pope. 2, 3, and Extra 3, J. Adams, Coventry. Extra 2, R. J. Pope, Brighton.

Mule.—1 and Extra, J. Bexson.

British Bird.—2, C. Foxon, Lutterworth. 2, G. E. Russell. 3, Miss Allen, Rugby.

Foreign Bird.—1, Mrs. Salmon. 2, H. Jelly. 3, C. Gascoigne, Rugby.

RABBITS.

Lop-eared.—*Buck or Doe.*—1 and Extra, A. Hudson, Hull. 2 and 3, Mrs. H. Pickworth, Moulton Marsh, Spalding.

Silver-Grey.—*Buck or Doe.*—1, Cup, and 2, A. Hudson. 3, B. Greaves, Cleethorpes.

Dutch.—*Buck or Doe.*—1, Extra, and 2, A. Hudson. 3, B. Greaves. Extra 3, Master E. Campbell; B. Greaves (2).

Himalayan.—*Buck or Doe.*—1, Mrs. H. E. Gilbert. 2, H. T. Hincks. 3, B. Robinson.

Any other Variety.—*Buck or Doe.*—1, B. Greaves (Belgian Hare). 2, H. T. Hincks. 3, G. H. Robinson (Belgian Hare).

Selling Class.—1, A. Hudson (Angora). 2, H. E. Gilbert (Dutch). 3, G. H. Robinson (Belgian Hare).

CATS.

Long-haired.—*Male or Female.*—1, R. Over, jun., Rugby. 2, Mrs. D. Hanbury, Chilton, Rugby. 3, A. Diver, Rugby.

Short-haired.—*Male or Female.*—1 and Cup, E. Baxter, London. 2, Mrs. Salmon. 3, C. F. Smith, London. Extra 3, H. B. Hensman, Rugby.

WINNERS OF POINT AND CHAMPION PRIZES.

Greatest number of Points in Pigeon Classes, H. Yardley.
Greatest number of Points in Rabbit Classes, A. Hudson.
Best Pen in Pigeon and Cage Bird Classes, H. Yardley.
Best Pen in Rabbit and Cat Classes, A. Hudson.

Judge.—Mr. E. Hutton, Columbarian House, Pudsey, Leeds.

NESTS FOR PIGEONS.

A useful form of nest for Pigeons, which I have not seen in use, is a modification of an ordinary shop till, and is, I think, an improvement on the usual earthenware pan. It is simply a rough block of wood of the required size, with a hollow for the nest; a useful size is 1 foot square by 4 inches deep, the hollow 9 inches across and 3 inches deep. Any carpenter possessing a lathe could produce them for a few pence. Their advantages are that they stand perfectly steady, afford a good ledge for the birds when entering or leaving the nest, and are not so likely to crack the eggs as earthenware. They are better than baskets, because they do not harbour vermin and can easily be scraped and limewashed after each sitting. I like them of such a size as just to fit behind the usual blinds, which I prefer to hang on hinges in the form of a door, as I can then get at the interior better with the lime brush.

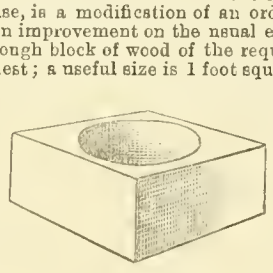


Fig. 103.

I suppose nine out of ten beginners are advised to use the earthenware basin, and place a brick in front to assist the birds into bed and prevent an upset, but this at best is a slip-shod contrivance.

The woodcut will perhaps give a better idea than words of the form I recommend.—Sciolist.

[The above plan for a Pigeon nest strikes me as good. I would merely add that it should be formed of wood that would not warp, and also that it be thoroughly well painted, not one coat merely, with oil paint. Then a cleansing would be easier and more effectually made by washing, and it would be a neater plan than limewash. The depth need not be so great as 3 inches, for I fully believe Pigeons prefer a shallow nest. The pans I use in my loft are 3 inches in depth, but I do not mean to have any more quite so deep. A scraper in the shape of a half moon (some meat-choppers are made in this form) makes the best instrument for cleaning the nest out thoroughly. I saw one in use in Mr. Heath's (of Calne) loft recently, and thought the idea a good one.—Wiltshire Rector.]

YORKSHIRE CANARIES.

At one period (none other than the last Canary-exhibiting season) I began to imagine that Yorkshire birds were becoming as numerous as were the acres of land in the county of (as the vernacular tongue of the locality expresses it) "Yark." I will not be too precise, however, upon that point, as I am "at sea" just now as to the exact number of acres of land the county possesses. However numerous may be Canaries bred in the county, still the vast number is further enhanced by those bred annually in the adjacent districts.

In the north of England the breeders of Yorkshire Canaries

vie with their southern or midland brethren, who devote their time more to the breeding of Norwich birds, once designated in a letter to me from Kilmarnock as "painted spuds," or in other words coloured sparrows.

Some idea of the number of Yorkshire birds bred may be formed from the fact that no less a number than eighty-nine picked specimens, sent by various noted breeders, put in an appearance at one of the north of England exhibitions last season. The schedules issued from South Stockton, Guisborough, Middlesborough, Darlington, York, South Shields, Bedale, Penrith, and Baildon, and likewise Northampton and Norwich, were responded to spiritedly, and many fine birds graced the show stages.

Unlike the Norwich breeders, who pride themselves more particularly respecting form and colour, several breeders of so-called Yorkshire birds have introduced as a cross the Coppy strain (the plain-headed birds), which has resulted in the production of unwieldy-looking specimens, not at all answering to the true type of Yorkshire birds. Not unfrequently have I had to pass by specimens bulky or "bullocky" in shape, exactly in appearances Manchester Plain-heads, preferring those of a medium size, and somewhat more slim in make and general contour.

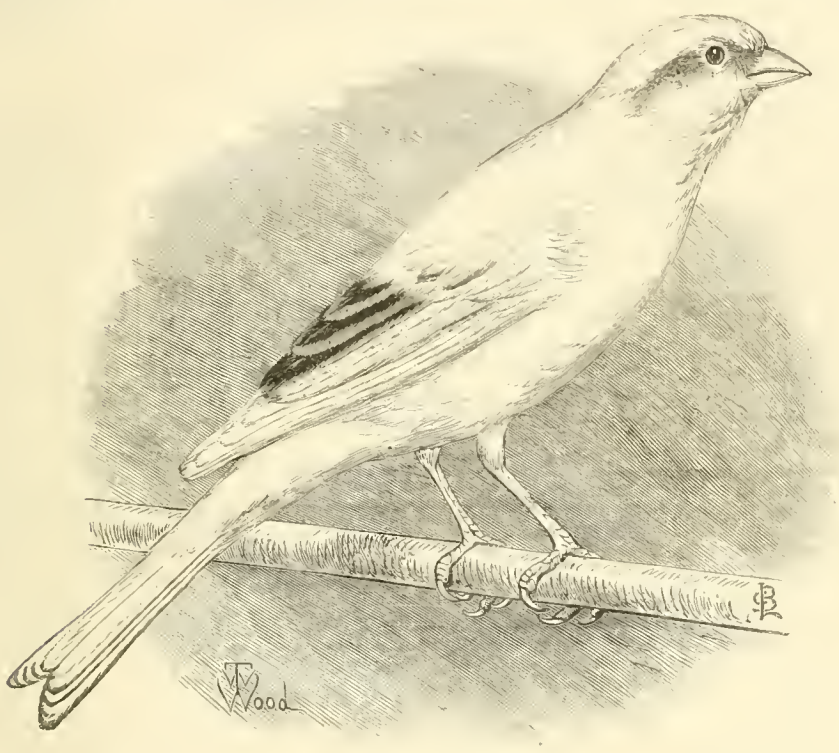


Fig. 104.—Yorkshire canary.

At several shows half a dozen classes are set apart for Yorkshire-bred birds, two of which are appropriated to Clears (Yellow and Buff), two for Even-marked, and two more for those Uneven-marked. Some fanciers prefer a six-marked bird, thus: Spectacle-eye marks, dark and regular, smaller or lesser flights, and the tail with a dark feather in each side. To breed a bird marked to such a degree of nicety is a somewhat difficult matter, and were judges to make choice only of six-marked specimens there would be fewer even-marked birds shown.

The illustration represents a four-marked Yorkshire Canary, possessing nicely-pencilled eye marks and dark lesser flights, but tail entirely clear. It was sketched from a bird (No. 591 exhibited at the last Crystal Palace Bird Show by Mr. Luke Belk of Dewsbury, Yorkshire, a breeder of some repute of this particular kind of Canary, who won the first prize in Class 23, for "Clear, Marked, or Variegated Yorkshire." At the Palace Exhibition there were but a dozen specimens exhibited in the class, some of them of note as prize-winners at previous all-England shows, creditable alike to their owners for the condition they were in when sent for exhibition, especially those shown by Mr. Belk (whose better-half also takes vast interest in the fancy of her husband, and may be seen interesting herself at most of the north of England shows), and Messrs. Tomlin, Wilkinson, and Mackley. Evenness of marks to a great degree assisted Mr. Belk's bird in defeating Mr. Tomlin's fine clear specimen, which, if I am not mistaken, has succeeded more than once or twice as a first-prizetaker.

In the past season generally the Yorkshire birds were a source of great attraction (sometimes a little sensational), but no show held presented a finer display of real quality birds than the one held at Baildon, for apart from any remark of an hyperbolic character, I never remember witnessing a finer lot of Yorkshires than Mr. Myers Mann and the Baildon executive collected together from the various exhibitors in England. The first-prize bird exhibited by Messrs. Hutton & Thackray was a complete pink of perfection, and well represented the breed of Yorkshire Canaries. The bird was justly awarded a cup.

In colour the Yorkshire Yellow bird is more of a lemon tint, although endeavours have from time to time been made to introduce the colour of the Norwich. This cannot be effected without materially affecting the form of the bird, and somewhat contracting its length, which is as great an evil as the cross with the Manchester Canary. The Buff or Mealy birds are lighter-coloured than Norwich birds, but of a close soft appearance of plumage.

The chief characteristic points of the Yorkshire bird are:—

Beak somewhat slender.

Head round and moderate in size.

Neck straight and longish.

Shoulders rather broad, but not too much so, and not high.

Back well filled in and straight.

Stand, firm and of bold carriage.

Wings long, and not crossed at the tips.

Legs rather long.

Feet and Nails not coarse or twisted awry.

Feathers close and perfect. (This point I look upon as a most important one—viz., closeness and condition of feather and the reverse of being coarse. In breeding or crossing-in with the Manchester blood, closeness of feather becomes deteriorated and loose).

Tail close and straight. (Pipy-inclined, not fish-tailed.)

In the marked specimens the additional points are—

Eyes. — Pencilled from the beak slightly on each side of the eyes regularly, and tapering towards the neck. This is preferable to the pencilling suddenly chopping off immediately behind each eye. The pencilling about each eye should correspond as nearly as possible.

Lesser Flight Feathers.—Dark without any tendency to greyness in the webbing. The more solid the colour the better, and there should be no intermixture of light or white feathers with the dark ones.

Tail either clear or a dark feather on each side. Regularity is an important consideration.

The body and entire bird otherwise should be free from ticked or dark feathers. In an uneven-marked specimen it is of no consequence.—Geo. J. Barnesby.

DETECTING THE SEX OF EGGS.

I have noticed more than once in your paper an observation to the effect that the sex cannot be detected. Perhaps not with certainty; but there is a mode in use in the country which has not, I think, been alluded to by you. It is this: By holding the egg before a strong light and making a telescope of the hand, a dark portion will be visible, and its position is indicative of the sex—*e.g.*, if on the top of the yolk it is a cock certain, if nearly on the top a cock probably; if on the side, midway, a hen certain. I know a man so practised at the examination of eggs for setting as to feel confident in the truth of the theory and of his own capability of discriminating. That is to say he would guarantee from a lot of eggs to choose a setting of hens certain, or otherwise as desired.—H. G. Watson.

[We have kept and studied poultry more than forty years—long enough to teach us we know very little on the subject.

We do not discontinue our observations and experiments, and now and again we learn something. Doctors are often in their opinions wide as the poles asunder, yet like your authority they are both "confident." A short time since two men wrote on consumption. Mr. B said salt was a cure, and often a preventive. Mr. H said the disease would be unknown if no one ate salt. Twenty years ago two professional men came to us, asking permission to pick out of a large number two experimental sets of eggs. We agreed on condition that we should be told the intention and the result. One wished for all cocks, the other pullets. Both hatched a mixture of sexes. The old theory was and is, the cock is hatched from a pointed, the pullet from a round egg. Old cockers in the north and north-western parts of England still profess to choose sittings to produce all cocks. They are never right throughout, and they never publish their failures. Our experience goes to tell us that the first eggs of the season—that is, the first laid eggs of the year, produce more cocks than the subsequently laid eggs; we cannot tell why, nor can we discover any difference between the first eggs and others that come after. At the end of five days or a week we can tell the fertile from the bad eggs by the first development of the germ of life: it is plainly visible. Beyond that our knowledge does not go. We promise we will go into some other experiments, and we will communicate the result. Our present belief is that it is impossible to foretell the sex of the chicken from any examination of the egg. It is a pity it has never been tried under circumstances that might bring about an authoritative settlement of the question. It was tried by the ancients, but although they have left on record the means employed and believed in by those who used them, we have no record of success, nor any rule that can be followed now.

There are always amateurs who wish for young birds to bring up under caged adults that have properties or talents they wish to perpetuate. It is rather a troublesome process, and the young in a nest are painfully alike. To rear a number of hens would be labour lost. Practised and clever men who make such things their study have discovered that at the time when the young are about half fledged, the top bird (and one is always above the others) is always a cock.]

BOILING EGGS.

Mr. Radclyffe, on page 402, gives us the Oxford mode of preventing the white becoming tough. I have long followed another method—namely, putting the egg into cold water and allowing it just to come to a boil. Brande puts the coagulating point of white of egg as low as 150°, and it is certain that 212° is quite unnecessary. Neither Mr. Radclyffe's plan, however, nor mine will succeed unless there is a sufficient quantity of water. The minimum quantity might be found out by experiment. In my plan also care must be taken that the fire is not too fierce, or the water will boil before the egg is cooked.—G. S.

WEAK STOCKS.

I have two boxes of bees standing by the side of each other, one weighing 20 lbs. without box and floor-board, but having very few bees in it; and I do not see them work or take anything into the hive. I can see in at the window that there is plenty of honey. Shall I put a swarm into it if I have one, or what would you advise me to do?

The other hive has a very small number of bees, and they have no new comb, but only a few pieces made last year. I have another hive which did nothing last year, it neither swarmed nor worked in the super, and they do not appear very promising this year. I have some stocks doing very well. There have been several swarms near me, but I have not had one yet.—F. G.

[Your three stocks are in a bad way. We should advise you to examine the two first hives with "plenty of honey." Cut out any mouldy or defective combs you may see, and put the first swarms into them; they will start well, and probably give you a lot of honey later on. Do the same with the hive containing only a few pieces of comb. You need not trouble about the few bees that remain, as they will probably join the swarm without the loss of a single life. Should there be any queen, it will either be conquered if weak, or conquer and reign if strong.]

OUR LETTER BOX.

Wishaw Poultry Society.—Is it customary with this Society not to pay prize money to competitors after they have gained the prize? I competed at the last Show, gained two prizes, have written three times for the prize money and have not got it.—James Kirkland, *Stewarton*.

Bullfinches Taken in the Nest (*M. J. C.*).—The best food on which to rear young Bullfinches when taken in the nest is rape seed mixed with stale roll or buckwheat, grits, and a little plain biscuit, each steeped in milk. The young should be removed when about twelve to fourteen days old, when the tail feathers begin to push. Feed the birds early in the morning and frequently during the day. If it is intended to learn the birds to pipe a tune, keep them entirely out of the sound of all other birds, as they quickly acquire any harsh notes, and which they will rarely ever quit. The male birds can be known in the nest by the tinge of red on the breasts, if you wish to select them. The hen birds will also learn to pipe, but not so well as the males. When young Bullfinches begin to feed themselves they will get into voice and pipe in their natural way. Young birds should be treated tenderly, and they soon learn to know those who attend upon them.

Stock of Driven Bees—Bees Clustered Outside (*G. L.*).—We think that your hive which was peopled in August last year, and which has drones in it now, is thriving and healthy. Probably the bees built some drone combs near the centre of the hive, which are now yielding drones before the hive is full. If it does not fill and work better soon, you may suspect that something is wrong. An examination of it internally will enable you to discover whether it has lost its queen or is otherwise affected. Your other two hives are ready for swarming, and will probably swarm on the return of warm weather. In nineteen cases and nineteen seasons out of twenty such hives swarm. Clustering at the doors of hives (rather small) is generally a preliminary to swarming, and not an indication that the bees will not swarm. If you have not time or patience to watch and wait for the bees swarming of their own accord, you could resort to the artificial swarming, which is so easy of accomplishment.

Cheapest and Best Hive (*J. Berry*).—No one can answer your question without knowing whether you wish for honey or swarms, whether to see the bees working, or whether you wish to prevent swarming. The cheapest hive on the depriving system is Payne's straw hive and straw super.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. May and June.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 26	30 255	55.2	48.4	N.W.	56.8	65.0	45 0	115.2	42.0	—
Th. 27	30 251	54.6	53 4	N.W.	56.2	61.1	44.5	103.6	41 0	0.010
Fri. 28	29.883	54.3	52 8	S.W.	55.1	66.4	43.3	115.4	46.9	0 410
Sat. 29	29 811	60.2	49 0	N.	55 5	57.2	49.0	78.1	49 4	—
Sun.30	29.915	53 5	47.2	N.	53 3	65.7	42 6	121.5	39.8	—
Mo. 31	30.031	54 8	49.0	E.	54.7	67.0	39 8	118.7	39 2	—
Tu. 1	30 137	55 6	53.2	S.W.	55.5	75.1	43.3	121 8	43.1	—
Means	30.040	55.5	51.1		55.3	65.4	44.8	110.6	43.1	0.420

REMARKS.

26th.—Rather dull till 4 P.M., after that time fine and pleasant.

27th.—Fine early, but soon becoming dull, though still fair, and so continued all day.

28th.—Cloudy early, rain at 9 A.M., dull morning; fine for a short time in the middle of the day; heavy rain at 9 30 P.M., and slighter rain after.

29th.—Rain in the past night, early morning, and slight occasionally during the day, which was dark, cold, and disagreeable.

30th.—A very pleasant day, bright and sunny but not hot.

31st.—A very fine day throughout, but rather cool for the season, the wind being easterly.

June 1st.—A complete summer day, bright, sunny, and warm.

Colder by 2° than the preceding week except under ground, which has only decreased 0.2°. The weather generally pleasant, but rather cold for the time of year.—G. J. Symons.

COVENT GARDEN MARKET.— June 2.

The markets have been well supplied during the week, and a free supply may be looked for now both in fruit and vegetables, the Continent and Channel Islands sending heavy consignments, especially of Early Ashleaf, which are now selling at 14s. to 21s. per cwt. The last cargo of St. Michael Pines by one of the Mail steamers has been disposed of at fair rates for the season.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	2	6	to 3	6	Mulberries lb.	0	0	to 0	0
Apricots box	2	6	4	0	Nectarines dozen	15	0	30	0
Cherries do.	2	0	4	0	Oranges ℔ 100	5	0	14	0
Chestnuts bushel	0	0	0	0	Peaches dozen	15	0	30	0
Currants ½ sieve	0	0	0	0	Pears, kitchen dozen	0	0	0	0
Black do.	0	0	0	0	dessert dozen	0	0	0	0
Figs dozen	8	0	12	0	Pine Apples lb.	4	0	8	0
Filberts lb.	0	0	0	0	Plums ½ sieve	0	0	0	0
Cobs lb.	0	0	2	0	Quinces dozen	0	0	0	0
Gooseberries quart	0	4	0	6	Raspberries lb.	0	0	0	0
Grapes, hothouse lb.	3	6	12	0	Strawberries lb.	3	0	16	0
Lemons ℔ 100	8	0	12	0	Walnuts bushel	8	0	12	0
Melons each	3	6	10	0	ditto ℔ 100	1	0	1	6

VEGETABLES.

	s	d.	s.	d.		s.	d.	s.	d.
Artichokes dozen	3	0	to 6	0	Leeks bunch	0	4	to 0	0
Asparagus ℔ 100	3	0	6	0	Lettuce dozen	1	0	2	0
French bundle	0	0	0	0	Mushrooms pottle	0	9	2	0
Beans, Kidney ℔ 100	2	0	0	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	0	0	0	0	Onions bushel	4	0	8	0
Beet, Red dozen	1	0	3	0	pickling quart	0	6	0	0
Broccoli bundle	0	9	1	6	Parsley doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	0	0	0	0	Parsnips doz	0	9	1	0
Cabbage dozen	2	0	0	0	Peas quart	2	0	4	0
Carrots bunch	0	6	0	8	Potatoes bushel	2	6	6	0
Capsicums ℔ 100	0	0	0	0	Kidney do.	8	0	8	0
Cauliflower dozen	4	0	8	0	Radishes doz. bunches	1	0	1	6
Celery bundle	1	6	2	0	Rhubarb bundle	0	4	0	9
Coleworts doz. bunches	2	0	4	0	Salsafy bundle	1	6	0	0
Cucumbers each	0	6	1	6	Scorzonera bundle	1	0	0	0
pickling dozen	0	0	0	0	Seakale basket	0	0	0	0
Endive dozen	2	0	0	0	Shallots lb.	0	3	0	4
Fennel bunch	0	3	0	0	Spinach bushel	3	0	0	0
Garlic lb.	0	6	0	0	Tomatoes dozen	4	0	6	0
Herbs bunch	0	3	0	0	Turnips bunch	0	0	0	0
Horseradish bundle	0	0	4	0	Vegetable Marrows doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	JUNE 10—16, 1875.	Average Temperature near London. Day.	Night.	Mean.	Sun Rises. m.	h.	Sun Sets. m.	h.	Moon Rises. m.	h.	Moon Sets. m.	h.	Moon's Age. Days.	Clock after Sun. m.	e.	Day of Year.
10	Th	Royal Society at 8.30 P.M. Leeds Hort. Exhibition.	69.6	46.9	58.3	45	af 3	13	af 8	15af	11	30	0	☽	0	56	161
11	F	Literary and Artistic Society at 7 P.M.	72.1	47.6	59.9	45	3	11	8	after.		41	0	8	0	44	162
12	S	Royal Botanic Society, 3.45 P.M.	71.4	46.1	58.8	45	3	14	8	40	1	51	0	9	0	31	163
13	Sun	3 Sunday after Trinity.	71.9	47.4	59.6	44	3	15	8	52	2	1	1	10	0	19	164
14	M	Royal Geographical Society at 8.30 P.M.	72.6	47.9	60.3	44	3	16	8	4	4	12	1	11	0	6	165
15	Tu	Zoological Society at 8.30 P.M.	72.8	48.2	60.5	44	3	17	8	17	5	24	1	12	before		166
16	W	Royal Botanical Society—Second Summer Exhibition. [Royal Hort. Society—Fruit and Floral Committee.	72.6	48.3	60.4	44	3	17	8	30	6	40	1	13	0	19	167

From observations taken near London during forty-three years, the average day temperature of the week is 71.8°; and its night temperature 47.6°.

FINE-FOLIAGED PLANTS FOR INDOOR DECORATION.

IN a former paper, while advocating principally flowering plants for house decoration in autumn and winter, I stated that there is something refreshing in the appearance of fine foliage in the heat of summer, I may add that there are niches and corners in mansions where symmetry rather than colour is wanted; where a noble Palm or a graceful Fern judiciously placed seems to harmonise so thoroughly with the architectural and other permanent ornaments, that to remove the plant seems to leave an almost irremediable blank. For such places the two classes of plants named (Palms and Ferns) undoubtedly contain many species and varieties, which can have no competition from any other class; but unfortunately many of the plants are costly, and proprietors who pay away considerable sums in the course of the season to have their town residences furnished in perhaps a third-rate manner, will not employ a competent person to look after the plants, but expect their domestic servants to do it; or, what is as bad, they employ someone in a small way of business who has neither the taste nor the ability to decorate well, but who understands one thing perfectly—making out his account. It would be far cheaper in the end to employ a competent person, to say nothing of the pleasure and good temper derived from seeing the work well done. We know by experience what our great furnishing houses can do when appealed to on special occasions, and even what can be effected by a competent private gardener who has the material to select from. I see no reason why the London mansions of the wealthy should not be perpetual conservatories during the summer season, and I believe many of them might be so for the same or little more than the sum now expended merely for floral decorations on special occasions. I do not, however, expect proprietors to take my view of the matter directly, and meantime I will name a few effective plants which are very easy to grow, and which when grown and placed in position if either the housemaid should drown them, or the footman allow them to be dried up, the pecuniary loss would not be very great.

The first on my list is the Palma-Christi, or Castor-oil Plant (Ricinus), of which there are several distinct and striking varieties, some with glaucous light-green foliage and stems, as in R. africanus, and others with red stems and bronzy leaves a yard wide, as in R. Obermannii, and all of them, if grown quickly without being stunted, almost rivalling the Palms. The seeds of these, which can be bought for a few pence, should be sown in brisk heat six or seven weeks before the plants are required, and hardened in an intermediate house. They can be used in the mansion with grand effect long before anything of the sort can breathe the outdoor air with safety. If not required till the spring is somewhat advanced they may be raised in a frame, or even in a warm room, but they must never receive a check. Seeds of this kind of plants are generally sown too early; ours for the flower garden in summer, where they attain a height of 10 or 12 feet, are never sown till May, and are planted out after the middle of June.

Melianthus major is another grand Palm-like plant for either indoors or out. It is of slower growth than the Ricinus, and should be sown early in January in heat and afterwards hardened, when it will bear without injury several degrees of frost. Acacia lophantha, sown at the same time, makes plants 18 inches high in three months, which are admirably suited for grouping. If larger specimen plants are required seed should be sown the previous summer, and the plants merely kept from frost. There are many other good plants which may be easily raised from seed and used for the above purpose, as may be seen by referring to a catalogue of subtropical and ornamental-foliaged plants, but I think I have named the very best.

Then, again, among the greenhouse Conifers there are several shrubs admirably suited for this purpose—notably Araucaria excelsa. Amongst other greenhouse plants are Dracænas, Cordylines, Ficus elastica, Abutilons, Aralias, and Musas; and amongst hardy plants perhaps the best are Yuccas and hardy Ferns. The latter might be potted the previous season, and forwarded in a greenhouse.

I do not think it well to use very many variegated and coloured leaves in decorating a mansion, and those which are used should be distinct and decided. There is generally not sufficient light to bring out colours which are not bright in themselves, and often the prettiest colouring is on leaves which are otherwise heavy in appearance, as, for example, the fine-leaved Begonias. It is safer, therefore, when experimenting, to trust rather to beauty of form than to beauty of colour; and after the miles of bricks and mortar, dust and hot pavements one has to pass in London, I think it would take a large quantity of well-placed Palm and Fern-like foliage to tire the eye, especially now that there are such masses of cut flowers used.

Plants of thick close growth should never be used, but only those which are light and airy, although they may be large and grand, as in the Palms, and of course they should not be crowded. I consider that, although foliage plants are easier to grow than flowering plants, it takes greater taste to place them in position; for they at once detract from or they greatly add to the general embellishments. The illustration and note about the pots on page 415 is very opportune, and should be constantly borne in mind.

It is a good plan to plant Lycopodiums to cover the soil in the pots. I also have a quantity grown in small pots for placing amongst the plants when they are used in groups. Kept growing, it has a much better effect than dying moss or branches would have. Some of the climbing Club Mosses, Ivies, and other plants might be grown in the same way for drooping round the edges of baskets and vases. For this purpose the green Loosestrife (Lysimachia nummularia) is very suitable, for it

will flourish in any temperature, and even with a deficiency of light falls more closely over the sides of the pots or baskets than it does when grown in a more natural manner with abundance of light and air.—William Taylor.

THE CINERARIA.

This is one of our most useful cool greenhouse plants for midwinter and spring decoration, for which it has few equals; it is also valuable for cut flowers. It is so easy to cultivate that almost anyone may grow it. Usually the plants are grown from seed, but they may be increased by offsets. Those who have old plants of any good variety, and wish to increase them, can do so as follows.

As soon as the plants are out of flower cut them down to within 2 inches of the surface of the soil to induce them to make fresh growth from the bottom. At this stage the supply of water must be reduced until they show signs of growth. But the simplest plan is to plant them out in a shady border, giving them a little water when required. By July or August there ought to be some signs of growth, and the offsets, when sufficiently long and have emitted rootlets, should be taken off and potted in rather small pots. Place them in a cool pit or frame, or hand-lights would do, keeping them rather close for a few days until they are established, but shaded from bright sun. When sufficiently established they will do in any cool shady place, such as behind a north wall or hedge, but not under trees. By the time the pots are filled with roots fine foliage will begin to develope itself. At this stage they must be repotted into larger-sized pots, taking care to have the balls thoroughly moist before repotting. Avoid large shifts, but they must be sufficiently large so as to keep the plants growing, as any check to free root-action is very pernicious. A 6-inch pot will grow a very useful-sized plant suitable for most ordinary requirements, while large plants for exhibition purposes are grown in 9-inch pots.

The soil to grow them in should consist of good turfy loam and leaf mould or well-rotted manure; if the loam is of a retentive nature add a sprinkling of sharp sand; a little charcoal dust is also a good addition. These ingredients well blended together will, with ordinary care, grow good plants.

Drainage is an important point—indeed, the future well-being of a plant will often depend much on the proper drainage of the pots. These must be thoroughly clean, and if they happen to be new and fresh from the pottery they ought to be thoroughly soaked in a tub of water previously to being used. These little matters if neglected will often cause some anxiety to plant-growers, as the dry pots will absorb the water which ought to nourish the plants. A good-sized piece of broken pot should form the foundation of the drainage, or an oyster shell will do as well, then a few more broken pieces on the top of the large piece. A light sprinkling of dry soot at the bottom of the pots will keep worms at bay. This may be mixed with the rough material which is placed over the crocks to keep the soil from the drainage.

The pots should never be filled too full of soil, but space should be left to hold sufficient water to percolate the entire mass of soil and roots. After each potting water must be rather sparingly used until the plants establish themselves in the new soil.

A cold pit or frame with a north aspect, but which can have an hour or two's sun night and morning, is suitable for growing the plants, but in all cases avoid a powerful midday sun. The pit sashes should be left off in fine weather, but they ought to be in readiness in case of heavy thunderstorms or hail, which would at once spoil the beauty of the plants. Night dews are very refreshing. By the time the pots are filled with roots good foliage ought to be hanging over the sides of the pots. At this stage the plants should never be allowed to flag for want of water, or they will certainly be attacked by green fly. I have always found it beneficial to water the plants overhead once or twice a-day in hot weather, with a fine-rose pot. Whenever the blooming-pots are full of roots a little guano water, an ordinary handful to every four gallons of water, applied to the soil two or three times a-week will be beneficial.

The plants cannot be grown too cool so long as they are kept from frost. In the winter they are best kept in cold pits with just sufficient means to keep off frost, or in a cool house near to the glass, giving air on all favourable occasions. Avoid as much as possible a close atmosphere with fire heat. If green fly makes its appearance it must be subdued at once by fumigation, but in this matter care will have to be exercised. A moderate dose repeated two or three times will be much better than one extreme fumigation, for by the latter plan the remedy would be worse than the disease, as it would spoil the foliage.

A word or two on seedlings. Seed may be sown at the present time in a seed-pan, and be placed in a cool house or pit. The soil must never be allowed to become dry, or the seeds will not vegetate. Some cultivators sow as early as March, but that is with a view of having the plants in bloom at Christmas, at which time they are often very useful, but are never so fine as in spring. The same cultural remarks apply to the seedlings as for the offshoots. Anyone feeling inclined to grow for exhibition purposes must not rely on seedlings, but had better buy named sorts from the growers.

Thrips will occasionally attack Cinerarias; in that case fumigation is the best remedy, but they will take more killing than green fly. As I have before said, better fumigate gently two or three times than give one overdose. A still night is the best for the operation. We sometimes syringe the outside of the house or frame during the time the fumigation is going on. This has a tendency to close the laps of the glass, thereby preventing to some extent the escape of the smoke. After smoking the house or frame ought not to be opened before the following morning.—G. R. Allis.

ROYAL HORTICULTURAL SOCIETY.

June 4th.

An adjourned special General Meeting of the Royal Horticultural Society was held last Friday in the Council-room, South Kensington, for the purpose of receiving a communication from the Council respecting the future prospects and condition of the Society, and to receive an answer to proposals made by the Council to Her Majesty's Commissioners. The chair was taken by the President of the Society, Viscount Bury. Amongst the members of Council present were Dr. Kellock, Sir Coutts Lindsay, Bart., Mr. Henry Webb, Mr. Little, Mr. Dobree (Treasurer), and the Hon. and Rev. J. T. Boscawen. Amongst the general body of the Fellows were Mr. G. F. Wilson, Mr. W. A. Lindsay (late Secretary to the Council), Mr. H. S. Godson, Mr. Shirley Hibberd, Mr. John Fraser, Dr. Denny, Dr. Pinches, Mr. W. E. Rendall, Mr. W. Pownall, Mr. Haughton, Sir Alfred Slade, Bart., Sir Alexander Gordon, Bart., Mr. Guedalla, Mr. Andrew Murray, &c. Several ladies were present, and the utmost interest was evinced in the proceedings, the Meeting being perhaps the longest of the Society ever held. Although at times a good deal of feeling was displayed, the proceedings on the whole were, under the able presidency of Lord Bury, conducted with good temper. The Meeting lasted from three o'clock until nearly six.

The Assistant Secretary having read the advertisement convening the Meeting,

The Chairman, who was slightly cheered on rising to address the crowded Meeting, said:—Ladies and Gentlemen, I think the best way of commencing the proceedings of this Meeting is to read to you a letter which has been received from Her Majesty's Commissioners in answer to the proposals which have been made to them by us. It will be in your recollection, ladies and gentlemen, that ten days ago our Meeting was adjourned to this day in order that we might consider the answer—if any answer was received in the meantime—from Her Majesty's Commissioners. At the time of our former Meeting we were not in possession of the views Her Majesty's Commissioners entertained as to the proposals made by our Society, and now, having heard what Her Majesty's Commissioners have to say, it will be my duty briefly to review the position of the Society, to tell you the position in which it stands with Her Majesty's Commissioners, and then to exchange with you some deliberations and take counsel as to what our future action with respect to the Society is to be. First, I will call upon the Secretary to read the reply which we have received from Her Majesty's Commissioners [hear, hear].

Mr. Hibberd said he thought it would be very desirable that the proposals of the Society should first be read [cries of "hear"].

The Chairman said he was taking the course he thought best for conducting the business of the Meeting [applause].

Sir Alex. Gordon.—Well, I beg to move, "That the proposals of the Society made to Her Majesty's Commissioners be read."

A Fellow in the body of the room seconded the motion, and it was carried.

The Chairman said as that was so he should make a statement which he thought might be advantageously done after the letter of Her Majesty's Commissioners was read. The noble Chairman was then about to read the letter in question, when,

Mr. Godson rose, and amid some cheering asked that the

proposals of the Society should first be read, and said he begged to move that they be read.

Amid some confusion this was seconded.

The Chairman said that if Mr. Godson's motion was carried he should resign his position in the chair [loud cries of "no" and some interruption]. He should certainly make the speech, and adopt the course which to him seemed fit [cheers].

Sir Alfred Slade.—Let me just ask a question [uproar].

Mr. Guedalla in the noise was understood to say that he had been accustomed to public business for fifty years, and that in his opinion the proposals ought to be read.

The Chairman observed with some warmth that he should not make the critical statement he had to make under the dictation of anyone ["oh!" and more interruption].

Mr. Shirley Hibberd.—There is no dictation whatever. Why not let us have the proposals before the reply? [cheers].

The Chairman.—Perhaps you will make my speech [uproar].

Sir Alfred Slade.—Although I agree it is desirable the proposals should be submitted to the Meeting, and that if any gentleman chose to read the reply to them first in the course of his speech, it would be so much worse for his speech. Still it is unusual to interrupt a gentleman in making a speech, even if he puts the cart before the horse [cheers and laughter].

Several Fellows rose to address the Meeting, but yielded to Sir Coutts Lindsay, who said:—We have done everything we could to come to an arrangement with the Commissioners. There are six schemes, and not one, and Lord Bury thought we should come to the sequence. If you thought right of it, it was competent for you to see all the schemes, and really the Chairman is anxious you should see all the schemes we have brought forward [cheers].

Mr. W. A. Lindsay.—Let them be read [cheers and interruption].

Sir Coutts Lindsay.—Let them be read in due course [much confusion].

Mr. W. A. Lindsay.—May I venture to suggest that you will read the substance of the letter instead of reading it verbatim? [cries of "no"].

The Chairman.—In all my experience of public meetings it has never been my fate to find a meeting at which the person who was elected to preside over its proceedings was not allowed to make his statement as he wished to make it [cheers]. I beg respectfully to say I shall make that statement in my own way, and as I think best, or I shall leave the chair. [The Chairman took up his hat as if to carry his threat into effect, and this was followed by loud cries of "no."]

A Fellow.—Let the Secretary read all the letters.

Mr. Guedalla.—The Chairman can embody them in his speech [hear, hear].

The Chairman.—That is the very thing I proposed to do [cheers]. If you do not let me make my speech in my own way how am I to make it at all? I assure the Meeting they would be in possession of the whole case if I were allowed to go on [cheers].

Mr. Haughton.—All we objected to was the reading of the reply before the proposals [hear, hear]. The correspondence ought to be placed before the Meeting in proper order [applause].

The Chairman.—If the Meeting chooses to say that I will do the best I can [cheers]. I wish to state Her Majesty's Commissioners have refused the proposals made them. I intended to place before you the way in which they have done so, but I honestly confess this interruption has fairly scattered the course of my thoughts; and although I should like to present to you as well as I can, and as briefly as I can, the position of the affairs of the Society, rather than observe upon an attempt made by ex-members of the Council, who, having quarrelled with the Council, could not remain in it, to ——

Sir Alexander Gordon.—Had not this be better avoided? [cheers].

The Chairman.—Well, I deprecate the course taken without hearing any of the facts discussed on the one side or the other, and I think it very unfortunate. Honestly, ladies and gentlemen, I confess my ideas are so scattered I very much doubt whether I can make the satisfactory statement I could have otherwise made to you. I will for the moment content myself with a brief review of the position of the Society at the present moment, and then in a few words give a parting counsel to the Society. I say a "parting counsel," for if I had been allowed to read that letter it would have been observed that the way in which our negotiations have closed with Her Majesty's Commissioners led conclusively in my mind and in the minds of several of my colleagues to the opinion that we could do no further good for the Society in resuming negotiations with Her Majesty's Commissioners. It is quite possible that others who may succeed and replace us may be more fortunate in establishing good relations between Her Majesty's Commissioners and the Royal Horticultural Society. But, for myself and colleagues, I can only say, with all respect for the Society, I shall decline to resume or continue these negotiations. Therefore I and some of my colleagues propose to resign into your hands the trust you were good enough to give us some time ago, and we ask you to select others who may have better fortune in dealing with Her Majesty's Commissioners than we have had. I should like to go back for a few moments to the origin of the Society. After the Exhibition of 1851 the Commissioners of that Exhibition, with the great and illustrious Prince Consort at their head, found themselves in possession of a very large sum of what was in fact public money, and it occurred to His Royal Highness the Prince Consort that the surplus of the funds arising from the Exhibition could not be better applied than in promoting science and art in every way attainable. Hence the gardens scheme was inaugurated. This South Kensington estate was bought and vested in trustees on behalf of Her Majesty's Commissioners of the Exhibition of 1851 for the promotion of science and art for ever. The place in which we now sit, and the gardens we now have under lease, was at that time wild waste ground. It is now surrounded by houses of great pecuniary value, and moreover it is of great value as one of the lungs of the metropolis [hear, hear]. There are two things essential to the consideration of this part of the question, especially to the whole of the west end of London—that this shall not be enclosed, and shall be preserved as an open space for ever; and another is that the Royal Horticultural Society has, by means which I will explain to you, or rather sketch to you, become possessed of a very large interest in this plot of land [hear, hear]. His Royal Highness the Prince Consort desired that this wild land should be beautified and adorned according to a plan which His Royal Highness himself designed, and he set about carrying out his design for the furtherance of science and art. He turned to a Society then pursuing the even tenor of its way at Chiswick, doing great service to horticulture, but not as I believe—for it was not in my time—in the enjoyment of a large revenue. His Royal Highness asked the Society to accept a charter and become tenants of this part of the grounds under certain conditions, and these conditions were that the Royal Botanical Society and the Royal Horticultural Society should expend at the outset £50,000 on the decoration of the grounds of which they became possessed. Money must be obtained for that purpose somehow. The Gardens were already mortgaged to Chelsea Hospital, and therefore could not be made available for the requirements of the Society. That statement rests upon the authority of my predecessor in this chair—the Duke of Buccleuch. (The Chairman read an extract from the speech of the Duke of Buccleuch at a Meeting held the 29th March, 1873). Well, continued the Chairman, I was not aware the grounds were mortgaged, but I may take the fact as substantially correct.

A Fellow.—There is no doubt about it.

The Chairman.—Well, the gardens being thus heavily mortgaged, what security could be given to anybody who would step forward and find the money for the beautification of these gardens? I hold one of the original debentures issued under the control of Her Majesty's Commissioners. Anyone who is fortunate enough to possess such a document will see that he has not obtained any security on the gardens, but upon the receipts [hear, hear]. Now, we must consider the attitude of mind the Commissioners and His late Royal Highness were in. The Exhibition had succeeded beyond anyone's expectation. It was expected that a new Eldorado—a new Fortunatus's cap had fallen upon the Commissioners. It was thought we should have made so much money that, when the £2100 rent was paid, and the debenture interest was paid, there would be a large surplus to be divided. This was the enormous estimate which then existed in the minds of the late Prince Consort and of his advisers when the debentures were issued. The debenture-holders no doubt shared in the sanguine expectation of His late Royal Highness, and believed the garden receipts would be ample to pay the interest, and in part the capital. International exhibitions, however, were held in Paris, New York, and St. Petersburgh, and the Eldorado was found to be a limited one—one having small boundaries; international exhibitions became a drug in the market, and then we had from the Exhibition of 1851 the bathos of the annual exhibitions held in the railway sheds at the head of South Kensington [hear, and laughter]. Great results were expected from these exhibitions, but people were deceived, and the result was that it was found the debentures rested upon no solid foundation. But I believe the debenture-holders will receive their money. But why? Because of the great names upon the security of which those funds were supplied; because no part of these gardens has been devoted to the uses of the Royal Horticultural Society itself, the whole property being at this moment vested in the landlords; and because the whole profits have been acquired and used by the Royal Commissioners [cheers]. It is for this reason I say Her Majesty's Commissioners cannot, and public opinion would not allow them to let these debentures remain unredeemed [cheers]. That is our security for the payment of these debentures. I am obliged unreservedly to express my views about these debentures, and tell you frankly we are not responsible for these debentures or the way in which they were raised, and which are such a heavy charge upon us. £50,000 of debenture bonds with

their interest forms the main liability of this Society; but it is because we look to the way in which these debentures were raised that the Council which has now the honour of addressing you through me, and because our lease is terminable at any moment, and that the whole usufruct of that money goes into the pockets of the Commissioners, that we think they are the people to whom the debenture-holders must turn. The interest of the debentures the Society will pay so long as they can, but the Commissioners should assist us in some way so as to provide for the satisfactory payment of the debenture debt. With that view whenever we approached the Commissioners we invariably assumed that they should take over the interest at least of the debenture bonds. I have detained you not too long, because it is a matter of the most vital importance respecting the debenture debt of the Society. And now I come to the time when, as I said, the International Exhibition had given place to the annual exhibition in those rows of sheds upon these grounds. By that time the principal power of Her Majesty's Commissioners was exercised by the gentleman who has done so much to advance science and art—I mean Sir Henry Cole. I believe the result of that man's remarkable and magnificent scheme over the way will remain an everlasting monument to his genius; but parents are rather fonder of their own children than of other people's bantlings, and Sir Henry Cole, I think, treated the Royal Horticultural Society rather hardly. When an arrangement was being come to in 1863 the proposal he framed was that every interest connected with the Royal Horticultural Society should be vested in the Commissioners of the Exhibition and not in the Society itself. I was not then a member of this Society, nor even a subscriber. I was not a member when my honourable friend Sir Alfred Slade organised the opposition to the then existing Council, which procured its resignation. But after that resignation was effected my friends and myself were called in as financial doctors of the Society, and I beg to assure you in this my farewell address that we with entire singleness of purpose have devoted ourselves to the interests of the Society. I found upon first joining the Society that it was believed that the Society was divided into two arms—the horticultural body pure and simple, and the South Kensington residents. I fought against the belief, but I confess I was vanquished by the belief. The Society is divided into two sections, and it is to be regretted. I am sorry to say I know little of botany, but I consider myself the representative now of the Royal Horticultural Society in its entirety. I have said this much to show that we have had to face a remarkable state of things immediately after our accession to office. Myself and colleagues were called upon to make the best we could of the circumstances, and I shall be able to show you that we resign our trust into your hands in a better, or at least as good a condition, as when we took possession of it. The debts of the Society on the 1st of January, 1873, were £6273, and on the 1st of January, 1875, they were £4887. Our total liabilities are not above a half-year's income of the Society, while the assets far exceed our liabilities, so much so that we could get on very well. Although we may have to starve our Society in a great many necessary things, still we are paying our way at this moment, and will pay it until the end of the year. The prizes won at our last show will be paid this or next week [cheers]. Prizes for future shows will be provided; and though like honest men we are narrowing our expenditure to the lowest limit, we are still paying our way. It is quite true that we owe a debt of £5000, and unless it is paid we shall find ourselves in financial difficulties. That debt was not incurred either by this or the last Council, and with respect to the debts of 1873 to 1875 I challenge anyone to say whether we have not discharged our part well. We have been made the successors of a debt placed upon us. Now, gentlemen, I come to the point when we took office. At that time, the scheme proposed between the Commissioners and ourselves having failed, it was our duty to find other bases of schemes which would be acceptable to them and enable us to live in amity with them. At that time the great position of Commissioner was accepted by a most active individual, Sir Henry Cole. Well, the International Exhibition child must be fed and kept up at any cost. Sir Henry Cole looked after his own offspring, and we were to go to the wall [laughter]. We were not wanted, but our grounds were wanted for the International Exhibition, and that is the long and the short of it [cheers and laughter]. We found it impossible to approach the Commissioners, and hence the Council could do nothing. The Council was told the sin of illegitimacy was upon them; but two years afterwards the Council received an intimation from the Commissioners, that having found the Council were now in a legitimate position, they should be happy to deal with them. What brought about that change? It was that Sir Henry Cole had ceased to be a Commissioner, that the annual Exhibitions had ceased, and the reasons why the grounds were desirable had passed away from the Commissioners' minds [loud cheers]. It was quite easy to see that it was from that moment the interest of Her Majesty's Commissioners to be on good terms with the Council. We were secure in the possession of the gardens. If we were turned out the Commissioners would either have to build upon the gardens—which public opinion would not sanction—or the Commissioners must devise some scheme to support the gardens. Were they to find the money out of the revenue of the Royal Commission? The gardens are unproductive, the annual subscriptions of the Fellows and the entrance money being the only means by which the gardens can be made productive. We have several means of keeping the gardens: we have a large organised body of three or four thousand Fellows; we have a great machinery at the disposal of Her Majesty's Commissioners, and we keep up the gardens for the benefit of the Commissioners [loud cheers and cries of "no, no"]. If we were removed the Commissioners would have to find from £2000 to £3000 a-year to keep them up, or at least a considerable sum, and that I believe does not suit the books of Her Majesty's Commissioners, who, if report is true, are not in the possession of very much ready money [loud laughter and cheers]. Under all these circumstances we approached Her Majesty's Commissioners with considerable confidence. It was not, however, until the early part of this year we received an intimation they were ready to treat with us, just after the time of our annual meeting in February. We were ready at a moment's notice. When Her Majesty's Commissioners said they recognised the legitimacy of your Council, we told you we had received an assurance from Her Majesty's Commissioners which led to the highest anticipations, and we said to you we hoped soon to arrange a plan by which the Society would be relieved of its difficulties and placed in a good financial position. I pledged myself to meet the Commissioners and to come to you at a meeting to be called for that purpose with some such plan. It was decided that it would be better for two of the members of our Council, Sir Coutts Lindsay and myself, should discuss the basis on which we could form negotiations. That meeting was held, and has been since treated less as a private meeting than was our original intention. At that meeting three alternative proposals were made by Sir Coutts Lindsay and myself. These proposals I will summarise. We said we would abandon the lease on this condition—first, that we should pay rent. Now that was a preliminary and informal meeting held on the part of Sir Coutts Lindsay and myself representing the Council, to arrange the business to be afterwards decided by the Council. This was not to be binding on the Society unless it was approved of by you. We said we would pay a rent of £250 per year and keep up the gardens, and that that would be better than to pay a rent of £2400 every five years. Our lease was to be terminable in the year 1881, or at any time that we did not pay the rent. Then another proposal was that we should make the payment of the £2400, or that our lease should be forfeited; and we also said if the Commissioners did not like that we had two other proposals—one that we would surrender the lease to the Commissioners if they would give us twenty days for exhibition in each year, and undertake our debenture debt [loud cheers]. A third proposal was that Her Majesty's Commissioners should give us leave to make the skating rink, give us possession of the leasehold property of the Society, and allow us to use the French annexe, our idea being to make an aquarium for the study of pisciculture to enable us to do the best we could with our property [cheers]. These proposals having been made, we were afterwards informed that the Commissioners having deliberated upon them found that the first was the only one which was in any way admissible, and that without approving of it they would be prepared to receive further details of that scheme. Upon that I wrote a letter to Lord Granville embodying the details. I may now say, as I see a representative of the Messrs. Prince present, that in our negotiations with those gentlemen we invariably received the most handsome treatment at their hands; in fact, they looked more to the interests of the Society than they did to their own [cheers]. However, as to the first scheme the Commissioners found fault with our statement of income and expenditure, and made their own statement of our financial position, with which we could not agree; and the Commissioners then wrote that on this ground and on other grounds the Inquiry Committee regretted they could not recommend the Commissioners to agree to the proposals, but that they desired that the Council would make other proposals. In answer to that the Council wrote that they believed the Commissioners were quite willing to help them. They had made other proposals, had shown their position, and if the Commissioners could tell them how to mould their proposals the Council would be willing to make such as they thought would be acceptable to them [hear, hear]. We therefore asked the Commissioners to tell us what proposals they would accept; and to that the Commissioners answered that it was not their business to make proposals, that the Council might try again, but they could not tell us what proposals would be acceptable. Now comes a very difficult part of the task, because, as you are aware, private negotiations often tend to more business conclusions than more public negotiations. I as President felt bound to try and ascertain what proposals would be acceptable to Her Majesty's Commissioners. Well, as

a detective would say, "on account of information received," we presented another atatement, and I regret to say that proposal met with non-acceptance on the part of Her Majesty's Commissioners. You know, ladies and gentlemen, that there are always two parties to a bargain, and that you may bring a horse to the water, but you cannot make him drink, and so you cannot make an arrangement between two parties who are not anxious to enter into it. We regret the Commissioners refused our propositions; we do not blame them, but think them in the wrong. They said they were not satisfied with the statement of our financial position, and said they would not enter into negotiations with us unless we could show we were in such a pecuniary position as would enable us to carry on swimmingly the business of the Society. We drew up a statement to show what the financial position of the Society would be if our proposals were accepted. In order that there should not be any difference of opinion as to the sum at which we were to put down our liabilities and our means as well, we invited General Scott, accompanied by Mr. Richards, to meet Mr. Dobree and Mr. Pugh, accompanied by Mr. Davenport. These gentlemen arrived at the result that the facts we placed before them were not in error and not in dispute. We did everything we could to satisfy the Commissioners, and at last we submitted them the proposal which I shall ask Sir Coutts Lindsay to read.

Sir Coutts Lindsay read the proposal as follows:—

"That the Royal Horticultural Society would hope to be placed in possession of that part of the French annexe which is built on ground now leased to the Royal Horticultural Society, and that the Society should be allowed the joint use of the orchard house entrances.

"If this proposal be adopted by Her Majesty's Commissioners, the Council anticipate that an increase in the Society's income would follow large enough to balance their income and expenditure, and to enable them with due economy to offer still greater advantages than heretofore to scientific horticulture.

"The skating rink would bring in by way of rent £1000 a-year, besides many new Fellows. It was one of the provisions of the agreement lately stopped and still open for acceptance by the Royal Horticultural Society, that all members of the skating rink were to be Fellows of the Society before being eligible for becoming members of the skating rink. A considerable augmentation of income under this last head is confidently expected, though there is no data whereon to form a basis of estimate. If the funds of the Society would admit of it—as they probably would in the event of these propositions being accepted—the Council would use every effort to afford additional advantages to horticulture, with respect to the exact nature of which it is their intention to confer with eminent members of the horticultural world."

The Chairman in continuation said, That proposal was enclosed in a letter, and in that letter we stated that the Council could not admit the accuracy of the figures stated in the letter of the Commissioners, that they were not in possession of the views of the Commissioners, and that as they had a sincere desire to "hit" their views they enclosed an alternative scheme; and that if the Commissioners would only tell us they approved of the one or of the other, or admitted one or the other, then the Council would propose a scheme to the Fellows at the adjourned Meeting of the Society. It was under these circumstances our Meeting was held, but upon the day of that Meeting no answer had been received. The second or alternative scheme was:—

"That the purely horticultural Fellows of the Society shall take the entire control and management of the Chiswick Gardens, and that the South Kensington residents shall charge themselves with the maintenance of the South Kensington Gardens, and have the control of those gardens. The amount of subscriptions in each case, and the apportionment of the burdens of the Society's debts, being left to be fixed by a committee chosen out of the general body of the Fellows and representing the Royal Commissioners, the Horticultural Society, and the resident Fellows. Shows and exhibitions to be held at South Kensington as heretofore. This scheme would leave the scientific horticulturists in possession of Chiswick for their operations, or would give the management of the South Kensington Gardens to those who paid for them, and would yet retain to the Royal Horticultural Society the use of the gardens for shows and similar purposes. To carry out this it is proposed that there shall be two rates for subscription, (A) one of which shall admit to the South Kensington Gardens alone under certain restrictions, hereafter called South Kensington Fellows. (B) The other shall admit to Chiswick and the Royal Horticultural Society's Shows, hereafter called Chiswick Fellows.

"The subscription A to be fixed at such a sum as shall be deemed sufficient to keep up the South Kensington Gardens, the permanent buildings, and a portion of rates and taxes accepted. Subscription B shall be fixed at such a sum as shall be deemed sufficient to keep up Chiswick Gardens, and to pay the expenses of the shows. The profits of the shows held at South Kensington to go to Chiswick. The Council of the Society to be increased, and divided into two permanent committees; one for the control of interior economy of South Kensington, the other the sole control of Chiswick, and a central Council composed of members from each Committee to regulate the general affairs of the Society.

"The other conditions of this scheme summarised are as follows:—

"The general funds of the Society to be fairly divided between the two branches of the Society.

"An agreed portion of the funds to be kept by the central Council for the payment of the debenture debt and general debts of the Society. Her Majesty's Commissioners to be asked to keep the permanent buildings at South Kensington in repair.

"Her Majesty's Commissioners to sanction the erection of a rink."

Then the third scheme was as follows:—

"The Fellows two-guinea subscriptions to be raised to three guineas, and the £4 4s. subscriptions to £6 6s., for a period of, say, three years. The tickets to be transferable. All entry fees to be abolished. Personal tickets of £1 1s. each to be issued to persons *bonâ-fide* belonging to the gardening profession, and to other persons resident without a given radius from London, giving the Fellows the privilege of attending all the exhibitions and Wednesday Committee Meetings of the Society. To ask the Commissioners to lend the Society the sum of £6000 at 4%, to enable the Society to pay off outside current liabilities. The increase of income under these new rates of subscriptions would be about £3991, which, added to the other estimated income, would give a total income of £13,091.

"All entrance fees to be abolished. A letter from the Assistant Secretary covered these proposals."

That makes six schemes which we have proposed to Her Majesty's Commissioners. I now come, ladies and gentlemen, to the letter of Her Majesty's Commissioners, and here I take the opportunity of apologising for any warmth of manner which I displayed at the earlier part of our proceedings [cheers]. Now I shall read for you the letter of Her Majesty's Commissioners refusing our proposals. It runs thus:—

"Offices of Her Majesty's Commissioners for the Exhibition of 1851.

"1st June, 1875.

"Sir,—I have to acknowledge the receipt of your letter of the 10th of May, wherein, after referring to the non-acceptance by the Special Inquiry Committee of Her Majesty's Commissioners of the proposals made on behalf of the Royal Horticultural Society by Lord Bury and Sir Coutts Lindsay, certain further propositions are submitted by the Council of the Society for the consideration of the Committee. I have also to acknowledge the receipt of your explanatory letter of the 20th of May. In reference to the passage in your letter of the 10th of May, in which you state that the Council cannot admit the accuracy of the figures given in my letter of the 5th of May, I am to state that the whole of the data made use of in reviewing the financial prospects of the Society (with the exception of the statement for repairs) were furnished by the deputation. But since the difference between the amount of the liabilities now given by you and that stated by the deputation is not so important, compared with the total deficit, as to have influenced the Committee in coming to a decision conveyed to you, this question need be no further debated.

"The Committee regret that they must decline the further proposals made to them in your letter of the 10th of May. The Commissioners are still desirous to assist the Society as far as they can do so consistently with their duty; but the Committee having in view their responsibility as trustees of the public funds, cannot recommend that they should consent to contribute towards the maintenance of the Society in the modes specified. It is not apparent to them that the concession even of the large assistance requested would be productive of advantages to horticulture, or in any way benefit the public. In the final paragraph of your letter of the 10th of May the Council ask the Committee what propositions they could recommend for adoption by the Society in the true interests of horticulture. I am instructed to reply that the Commissioners do not think it to be for the advantage of the Society that they should interfere with the management of its concerns further than absolutely needful. The Committee have had their attention called to the proceedings of the General Meeting of the 25th of May, and they observe with much regret that serious differences still continue to exist within the body of the Society. The Committee direct me to state in conclusion, that before recommending any proposition from the Society for assistance by the Royal Commissioners they will feel it incumbent upon them to satisfy themselves that the differences between the various sections of the Society have been composed; that the advancement of horticulture will in future be made the chief object of the Society; and that steps will be taken to put the Society financially on a more satisfactory footing.

"I am, Sir, your obedient servant,

"Henry Y. Scott, *Major-General.*

"The Secretary Royal Horticultural Society."

With reference to that letter, it closed our negotiations with the Commissioners. I may remark, however, that the Commissioners still say it is their wish to offer some aid to the Society if they can do so. For my own part I shall be quite willing to accept that assurance provided some other member of your body is the negotiator. I hope my successor may be more fortunate in his negotiations with Her Majesty's Commissioners than I have been. With regard to the remarks made as to the meeting of the 25th of last month being marked or distinguished by considerable discussion, I should like to tell Her Majesty's Commissioners that if they think a body of three thousand men are to possess a unanimity never known in the whole world, and that if they are to wait until we shall have that unanimity, they must really expect that the lion will lie down with the lamb [laughter]. Unless they are of that opinion the "composing" of the differences they speak of is a long way off [cheers and laughter]. I think some differences of opinion must exist amongst the members of the Commission themselves [loud cheers], because they are always saying they are willing to give us assistance, but the motive power in General Scott's hand is stronger than the large amount of sympathy we hear of with the Royal Horticultural Society [cheers and laughter]. It is to be hoped our successors will find themselves better able to "compose" the differences between the two bodies than we have been. I may say at once I am afraid we should not be able to frame any scheme which would be acceptable to Her Majesty's Commissioners. Still, I am willing to accept the statement they are willing to do what they can. I am also willing to say the Council have done all they could to frame such a scheme as they thought would be acceptable to Her Majesty's Commissioners. I now come to a matter somewhat personal. Four members of Council—Sir Coutts Lindsay, Mr. Dobree, Mr. Hume, and myself consider we should be only acting in the interests of the Society, with a due regard to our own dignity and position, and also to the trust which you have reposed in us, by surrendering unto your hands that trust; and to persuade you if we can do so—as I trust I have done—that we have not been either wrong or remiss with respect to your interests, and that we have done all we knew

how to do [cheers]. We feel the only honourable course is for us to give the opportunity to others to do what they can ["no, no"]. We will help you as well as we can, and all minor differences shall be sunk [cheers]. We will do all we can to relieve the Royal Horticultural Society, as far as it rests in us, from its difficulties, but we consider it our duty to resign our offices. I resign, Mr. Hume does so, Mr. Dobree does so, and Sir Coutts Lindsay does so. I have to thank those members of the Council who do not agree with us in this for their support. I never found in my life a more active or unanimous Council, or one more devoted to the duties of their office. Some of my colleagues do not think it their duty to resign their offices, because, as I believe, they think they were appointed by one section of the Society, and I do not think they ought to resign until that section takes the power out of their hands [hear, hear]. The horticultural Fellows have been in the majority, and therefore these gentlemen do not feel it their duty to resign. I will, if you will permit me, give you a parting word of advice. My own belief is that the only way to save the Society is that you should divide the two bodies, the pure and simple horticulturists, and the Kensingtonians as they are called [cheers]. Let the Chiswick Gardens be put in possession of a purely scientific body. The funds required would get still smaller, and I think the Fellows who live around these gardens ought to pay for their maintenance [hear, hear]. Let us divide for the common good. Let the scientific horticulturists go to Chiswick, and keep the "Kensingtonians" at South Kensington. That is a scheme you can carry out without the sanction of the Commissioners, and by reducing your expenditure you can keep within your income. I do trust whatever course you pursue may be for the benefit of the Society, for its relief from the embarassments which lie upon it, from its difficulties which are by no means insuperable. Pay your rent next year, and then you can keep possession. I must say before I close that what the horticultural papers stated was not altogether fair. It was never intended by anything which fell from me, that the idea that the Society was insolvent should be conveyed. In the first place, if I said so it would not be true.

Mr. Godson.—It is a pity you ever mentioned it.

The Chairman.—Well, that may be so. I may say that the claims brought against us have been paid. I beg to conclude this statement with a hope that you will find our retirement conducive to the benefit and honour of the Royal Horticultural Society [cheers].

After a short pause,

The Chairman again rose, and said that many members of the Society had expressed their wish to subscribe money to relieve the Society from its embarrassments. Mr. Ricketts promised £25, Mr. Godson £25, Mr. Paul £100 a-year for ten years on the condition that nine others would do the same [cheers]. Mr. Bull promised £100 in aid of our Show, and Mr. Dobree said he would give £100 [cheers].

Mr. Kellock said that as a horticulturist he did not feel it his duty to resign his seat at the Council [loud cheers]. Neither do the horticultural Fellows on the Council think it their duty to resign [cheers]. They respected the South Kensingtonians, but literally they had nothing to do with them [laughter]. On that ground the horticultural members of the Council did not tender their resignations [cheers].

Dr. Denny said the Meeting had to thank the noble lord for his able statement, and it could not be without regret that they heard it. The Council had come in as a Kensingtonian Council, and as a horticultural Council they had failed. It must be admitted, upon all hands, that the horticultural part of the Society was not in the position it was when the present Council took office. The horticultural Fellows were becoming disgusted, and were leaving the Society wholesale, and more than that, the attendance at the Gardens was falling off. In fact, under present management the Society would fall to pieces in a few months [hear and cheers]. The Council might say they were paying their present prize money, but why? Because no one was exhibiting [hear and laughter]. The present Council took office in opposition to the Royal Commissioners [cries of "no"]. Why, the Council turned out Royalty—they turned out Prince Arthur.

A Fellow.—Not at all—don't let that go forth—Prince Arthur resigned [hear, hear].

Dr. Denny.—He could not remain in office under the condition of affairs (cries of "time"]. I think our thanks are due to those members of the Council who do not resign [cheers].

Mr. Guedalla said the deadlock was entirely due to the shuffling conduct of Her Majesty's Commissioners [cries of "no" and "hear"]. Yes, they kept the Society in a fix for upwards of twelve months, and then in the month of February they came down and said they were ready to come to an arrangement. The Council had placed most excellent plans before the Commissioners, and what right had the Commissioners to indict their acts? The last plan proposed is the only one to work any real substantial good, and that is to separate Chiswick from South Kensington. He was extremely sorry to see these members of the Council resign, but it was really the only manly course open to them [hear, hear].

Sir Coutts Lindsay wished, before he left his seat on the Council, to express his extreme satisfaction at the way in which he had been met by all the members of the Council, and by the Fellows generally. He quite endorsed what Lord Bury said with respect to the Society. As to the charge brought against the Council of not having fostered horticulture, the answer was that the Council had neither money nor means. Lord Bury had very ably shown them the misfortune under which their Society had laboured. They never had funds to meet the expenses placed upon their shoulders by the Commissioners, and so the Society had been brought to a position—if not of bankruptcy—of great impecuniosity. It would be better after all to divide the two interests which existed in the Society. Let those who took most direct interest in horticulture take its management in their own hands. As regarded the resignations, he might say that he believed every gentleman on the Council acted to the best of his judgment. Mr. Hume who was not able to be present had written a letter, and he (Sir Contts Lindsay) would say with entire sincerity that those who retired did so with no feeling of soreness, and with the belief that they had at all times received the support of their colleagues and of the Fellows in general [cheers].

Mr. Dobree expressed his thanks for the support he had received from all connected with the Society. He was sorry his time had not been of more use to the Society than it had been, but he could not afford to give any more time, as he was engaged in commercial pursuits. Mr. Hume much regretted he could not attend that Meeting, as he had to be present that day at a School-board in Norfolk.

Sir Alfred Slade remarked that, according to the sixteenth bye-law no business except that for which the adjournment was made could take place. Therefore the Meeting was incapable of accepting the resignation of the members of the Council, or to appoint their successors. He regretted very much that there should be any reason for the resignation of the members of the Board who had tendered it.

The Chairman said Sir Alfred Slade was right. Another meeting would have to be called to deal with the resignations. That was strictly in accordance with the bye-law which he had quoted. The simple fact was they would have to call another meeting.

After a discussion about the bye-law,

The Chairman said he and his colleagues had not yet resigned, and perhaps they should not [loud laughter].

Mr. W. A. Lindsay said he regretted that he should have made some remarks upon the occasion of the last meeting which created or introduced a feeling of bitterness. All he could do was to express regret for these expressions [cheers]. Without going into any further matter, he wished to say that he believed the state of the Society was perfectly sound, and he felt it could be reorganised, but only by reverting, both actively and mentally, to the part represented by the picture over the Chairman's head, painted at a time when this Society was renowned for its science, but not for its local fashion [cheers and loud laughter].

The Chairman.—I have nothing further to say than that the Meeting is at an end.

Mr. Shirley Hibberd.—Have you taken your farewell of us? [cries of "no"]. Very well, then; he has made his farewell speech, and you know he has done good hard work, so give him your hearty thanks [loud cheers].

Mr. W. A. Lindsay seconded the vote of thanks to the Chairman, and then the protracted proceedings closed.

AURICULAS.

At the National Auricula Show in April, and subseqnently in the pages of the Journal, the question has been raised whether or not the florist Auricula, when under exhibition, should be allowed some stick or prop to its flower stem. With "An Old Fancier," and with all the northern growers to whom I have named the subject, I sincerely hope that this gratuitous disfigurement may never be sanctioned.

It should never be necessary. If the stems do not carry the trusses well there is, as a rule, blame to the grower, and he ought to bear the consequences. He has allowed the stalks to rise weak or become drawn for want of air to make them stiff and hardy. A few varieties—*e.g.*, Blackbird, Catharina, Moore's Violet, and Imperator are given to growing long on the stem, and this is a fault in such varieties, and makes its mark. Even these, however, when grown in the airiest part of the frame or house, may be so far managed as to require no stick. It should not be forgotten that one decided property in a florist Auricula is that the stem should be able to carry the head well, and therefore to permit artificial support is so much allowance to ill growth, and so much leniency to ill habit, to the commensurate disparagement of better management and qualities. For my own part I should be ashamed to show an Auricula

that could not carry its own head. Our rules against sticks to stems I have always read as rather a caution against leaving some avoidable mark of identification during the judging than as a prohibition of a practice calculated to help a top-heavy truss against specimens to which every natural advantage had been freely accorded in order to have them able-bodied. It cannot be said that Auriculas require sticks because of a long journey to the show. The plants can be so carefully packed and bound up in damp moss, and the stems can be so steadily secured by a stick and cotton wool, that no drooping or straining of the stalk is possible. I have a very tedious journey with my plants, and this is my experience.

Mr. Douglas, remarking that stems will rise at almost any angle from the plants, thinks sticks permissible to make them straight. I will tell him a better plan than exhibiting this contrivance at a show. Let the oblique stem be guided while rising with a short prop behind, and then, before the bloom is on, the stem will be set in better form. If it cannot possibly be made erect; the plant itself may at the show be potted aslant, to bring the truss upright. The argument that a stick, unsightly at the best, may be left in to save trouble of unpacking and repacking is probably one that few florists would think worth the using. Better take a few plants the less, in order to be able to care well for all.

You cannot give the Auricula any artificial support without spoiling the strength and elegance of its beauty. The disposition of the foliage round the stem, which rises crowned above it with a bouquet of wonderful flowers, often backed by a guardian leaf that used to shield those flowers when buds, is a form that nothing unnatural can improve; and a stick by the side of that stem is a mere wooden leg—is an ugliness that cannot be hid. This plant had better carry less weight of bloom than go upon crutches. For this, as for other reasons, I trust that sticks will not be voted-in. I submit that a clear field and no favour is here, as everywhere, the fairest play.

My own plants will have said for me that I am no advocate for cropping down to three pips such trusses as well could carry more; but in a head of incorrect pips, as well as good flowers, care should be taken not to present to the keen eye of a judge more ill-favoured than fine pips. Two bads will never make a good or count at all, except against the exhibitor; and a small truss which is correct rightly wins before a great truss that transgresses rules which are strictly the guide to precedence. There is little virtue here in mere quantity, but quantity of quality will be recognised everywhere, and nowhere more freely than in our great florist shows in the north.

Mr. Douglas was told that the premium white-edge at Manchester was a Catharina denuded to three pips. The plant was mine, and Mr. Douglas misinformed. It never had more than three, being a maiden bloom of correct properties; and the pips, though never large on Catharina, were nevertheless a shade above shirt buttons, and not exactly like threepenny-pieces.

The question is more than once asked, "Why, in point of body colour, is black so preferred in edged Auriculas? and why in Lancashire is this colour so far favoured as to make it seem no other will do?" Contrasts of a velvet black with snowy meal and the rich green edge are certainly very fine; but would not a violet or red ground colour be so too? Undoubtedly, and may we see them! But think the Auricula over, and it will be noticed that with black-bodied flowers are associated other properties in their finest order; that the black grounds have among them the purest edges, the richest tubes, the best-proportioned body colours. In them are green, grey, and white edges unruffled by rude inroads of colour dashing through, and there is also a density of ground colour, not faultily melting into some lighter shade before it reaches its limits towards the edge. Find in a red, lilac, blue, or violet body colour such a flower for correctness as Smiling Beauty, and it will not lack lovers in the north. But when with such colours we have the disappointment of a weakly-coloured tube, or irregular and insufficient edge, these faults must be laid to the flower and not at the door of a northern florist. It is just when the body colour of an Auricula is not uniform but shady, that the reproachful term of "chancy" should apply with justice, and though such a flower may be pretty, it is not so truly beautiful as that which is correct.

I have not the pleasure of growing the Alpine classes. To me their growth seems of a loose habit, and in many the stems are decidedly slender. Still, if even these could be grown without requiring sticks it would surely be better. I am loth to speak without the authority of experience or knowledge, therefore say no more with respect to these varieties. But my humble opinion of the florist Auricula is, that it ought to be shown with every feature and every outline free.—F. D. Horner, *Kirkby Malzeard, Ripon.*

MUNRO'S DUKE OF EDINBURGH CUCUMBER.

Those who require a great number of small or medium-sized fruit of good quality, rather than showy Cucumbers of great length, will find the Duke of Edinburgh the best of all sorts to cultivate. A fruit 12 to 15 inches in length is generally sufficient to place on the table of most families, and with even one plant, well grown, of the Duke of Edinburgh, there will be no difficulty in cutting a fresh fruit every day for months.

I have lately seen a striking proof of the value of this Cucumber in the attractive and well-managed garden of J. Sharp, Esq., Fairsnape, East Sheen, Mortlake, where, in a small span-roofed house, are growing six plants, three of Duke of Edinburgh, and three of Blue Gown. The whole of these plants are in the fine condition which may be expected from such a thorough gardener and excellent Cucumber grower as Mr. Young undoubtedly is. In this house Blue Gown is showing immensely, but fruit will not be ready to cut for a week to come, but the Duke of Edinburgh of precisely the same age, and under exactly the same treatment, has afforded a supply of valuable Cucumbers for five weeks. The fruit which has been cut, with the numbers now hanging, may be safely counted by hundreds.

Plants of this variety planted-out at the present time in frames made vacant by the removal of bedding plants would yield an excellent supply of Cucumbers during the late summer and early autumn months.—A Surrey Gardener.

FLOWERS AND FRUITS FOR THE SICK POOR.

You took such a kindly interest in the opening of our Mission in March, that I am sure you will be glad to hear that hitherto we have had great encouragement in the work. No words can describe what the effect has been on the suffering and sorrowing people to whom by thousands our little bouquets have been sent in workhouses, hospitals, and lonely sick-rooms in East-end courts. A letter this morning from a fever hospital says, "It is almost impossible to fully realise the unspeakable joy with which the weekly gifts of flowers are welcomed by the patients. May I venture to hope that we may still be considered worthy objects of the solicitude of the ladies of the Mission, and that our weekly flowers may be continued to us?"

It is with great regret, since the wild flowers have disappeared, that the last two weeks we have seen our supplies fall off so greatly, that though we have had more earnest applications than ever for them, we have been unable to give them. To-day, having applications for several hundreds, we have not one hundred tiny bouquets in hand. I therefore venture to write to you, trusting your influence may induce those who possess gardens and conservatories to remember the poor suffering people in our gloomy stifling streets, and send us for their use some of their brilliantly-coloured and sweetly-scented flowers, and also as the season advances some of the fresh Strawberries and common garden fruits which are so refreshing to the parched lips of the painstricken, and to the little pale-faced children who never see them growing, or taste them but when half rotten on some costermonger's barrow.

We have not as yet heard anything satisfactory from the railway companies concerning carriage. Our expenses are considerable, and we are most thankful for any subscriptions.—E. A. H., *Secretary, Flower Mission, Conference Hall, Mildmay, London, N., and Home of Industry, Commercial Street, Spitalfields, E.*

THE HORTICULTURAL CLUB.

An inaugural dinner took place at the Club house, 3, Adelphi Terrace, on Wednesday evening the 2nd, and was largely attended by the members. The chair was to have been taken by the Hon. and Rev. J. T. Boscawen, but as he was detained at the Bath and West of England Show at Croydon it was taken at seven o'clock by John Lee, Esq. After dinner the usual loyal toasts were given, and then the Chairman proposed

the toast of the evening, "The Horticultural Club and its Success." In so doing he wished it distinctly to go forth that it was in no way connected with any body, party, or clique in the horticultural world; that its object was to have a common ground where lovers of the science might meet, exchange opinions, and consult together on any matters connected with their common pursuit. He desired to couple with it the name of their Secretary, to whose exertions it was mainly owing that they were in their present favourable position.

The Rev. H. Honeywood Dombrain, in returning thanks, desired to thank both the Chairman and the members present for the manner in which the toast had been given and received, and said that he had lately received from a gentleman long connected with the horticultural world a letter in which he said that he believed it would do more to unite horticulturists than anything that had ever been started. He felt proud and thankful when he received that; and he could honestly state that nothing in what he might call his horticultural life would ever have given him greater pleasure, if it should be found that the Club would have the effect of encouraging a kindly feeling amongst the craft. He did not believe that, despite present appearances, horticulturists differed more than other people. Parsons differed, it was a truism that doctors differed, and we know that lawyers differ, but we can agree to differ; and he hinted that their Club would be the means of fostering a feeling of kindliness amongst the brotherhood.

We may add that the dinner was very well put on the table, and spoke well for the catering power of the manager. Amongst those who have lately joined are Sir Wm. Marriott, Bart.; J. Tyerman, Esq.; Col. Puckle, R.E.; G. Deal, Esq.; Bruce Findlay, Esq.; J. E. Buchan, Esq.; Wentworth Buller, Esq.; J. Cowley, Esq., and R. Warner, Esq.

THE FLOWER GARDEN.—No. 3.

The annual repetition of formal lines and masses of colour is objectionable from its sameness and monotony; designs of a more complicated form have therefore been gradually introduced. This has led to corresponding changes in the plants, for the obvious reason that for any design to be really ornamental, not only should the colours be as durable as possible, but the outlines must be clearly defined. The result is satisfactory for many reasons. We have now a greater variety of designs containing such charming combinations of colour as not long ago would have been considered impossible—plants new and old cultivated by thousands in every garden which before were only to be found in very small quantities in the hands of a few; quaint succulent plants and pretty alpine gems of minute growth but exquisite form, imparting an interest to the beds, a rich yet quiet and refined tone that was altogether wanting in the glaring masses of scarlet Geranium and yellow Calceolaria which found such favour a few years ago. As the effect is derived principally from the foliage, very little growth is required after the planting to clothe every part and detail of the design in fullest beauty, and, what is of even greater importance, it remains perfectly intact throughout the season, the rain which proves so fatal to blossom serving but to brighten the leaf tints and imparting vigour to the foliage. Thus, then, this lovely enamelling of foliage never fails us, but literally grows in beauty both under clouds and sunshine, till the falling temperature of autumn prompts us to substitute the hardier winter plants.

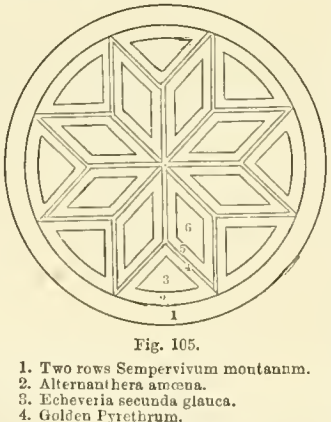


Fig. 105.

1. Two rows Sempervivum montanum.
2. Alternanthera amœna.
3. Echeveria secunda glauca.
4. Golden Pyrethrum.
5. Lobelia Blue Beauty.
6. Leucophyton Brownii, each panel to rise slightly above the blue.

There is no doubt that the facility with which the most intricate designs may now be delineated has, and still is, leading to the adoption of a much higher standard of excellence in the decoration of flower gardens than has prevailed hitherto. The old Roman mosaics are now reproduced with exquisite brightness and beauty. No finer examples have yet been produced than those which were so much and so justly admired in the Crystal Palace gardens last autumn. Plans of three of the circular beds were given with the report of those gardens in the Journal last October. Figs. 105 and 106 were also included among the designs in the circular beds upon the rosery mound. They are both copies of old Roman mosaic, and are worthy of especial notice for the novel and tasteful tracery which defines and encloses the various forms in the interior of each design.

Fig. 106.

1. Sempervivum californicum.
2. Sedum glaucum, dotted with Kleinia repens.
3. Golden Pyrethrum.
4. Lobelia speciosa.
5. Echeveria secunda glauca major.
6. Alternanthera amœna.
7. Tagetes signata pumila, pinched, and flowers kept picked-off.
8. Coprosma Baueriana variegata.
9. Coleus Verschaffelti.

Such tracing should always consist of colours that are bright and durable, its effect will then be equally telling in dividing other colours, or upon a groundwork of quieter tone. Very little attention has hitherto been given to this point. There can, however, be no question that in a large bed or wide border a groundwork of some neutral colour spreading over its entire surface, and with brighter colours apparently springing out of it, presents an appearance of chaste, pure, and refined beauty. Take for example a border or bed of the lively grey Antennaria candida skilfully embroidered with such plants as Haworthia cymbiformis, Kleinia repens, some of the Sempervivums, the pretty yellow Arabis lucida variegata, the carmine Alternanthera amœna, and the rich blue Lobelia Blue Beauty, and we have an object of surpassing beauty, infinitely superior in every respect to the more brilliant alternations of ordinary ribbon borders. Or if a design of brighter tone were required, we have but to substitute Alternanthera or Coleus for the grey to impart shades of pink or crimson, and Golden Pyrethrum or Arabis for yellow.

The increasing attention that is given to the combination of various colours in the same bed induces a decided preference for beds of simple form, plain circles and oblongs being slowly but surely substituted for the more intricate figures which experience proves to be rather curious than ornamental. This is decidedly a step in the right direction.—Edward Luckhurst.

SCENTED ROSES.

Your enthusiastic correspondent, the Rev. Mr. Camm, will be pleased to know that this year will be noted for a magnificent Rose combining the two qualities, form and perfume. I refer to General Von Moltke, a bloom of which, perfect in shape and of the most exquisite scent, I had on my desk last week. Perle des Jardins will when known supersede Maréchal Niel, it being an upright flower of splendid shape and colour. Jean Ducher is a superb button-hole Rose, its lovely wax-like petals deepening to peach colour in the centre being an acquisition. Marie Guillot as a white Rose is acceptable, its petals are, however, rather thin and watery; it will no doubt be an exhibition Rose. Duchess of Edinburgh, Tea-scented, a pretty flower, but lacking as yet substance. Shirley Hibberd with me thin, having but, I think, eight petals. It is a beautiful bud, the colour being as described nankin yellow.—J. Hobbs, *Bristol.*

I am delighted to find that this subject has been started by so able a champion Rose-grower as Mr. Camm, and trust that the subject will be kept alive. As a rosarian of the third water, I would, with all humility, add one old Rose—namely, Camille Bernardin, which possesses a fragrance unsurpassed, and at the same time it has every other good qualification either as a garden or exhibition variety.—D. Sewell, *St. Neots, Hunts.*

Stamford Horticultural Society.—At this Society's proposed Show in September, since our notice last week, we are informed that there will be special prizes of silver cups offered

by Messrs. Sutton & Sons, Reading, for a collection of fruits; by Messrs. Carter & Co., High Holborn, for vegetables; Messrs. W. & J. Brown, Stamford, prizes for vegetables; Mr. Pearson of Chilwell for his bedding Geraniums, and Messrs. Paul and Son, Cheshunt, for twenty-four cut Roses. The Marquis and Marchioness of Exeter, the Duke of Grafton, Sir John C. D. Hay, Bart., M.P., and the Mayor of Stamford also contribute liberally to the prize fund.

HOW TO PROLONG THE SEASON OF CUTTING MELONS FROM THE SAME PLANTING.

When the Melon is grown in houses and trained to wires like Vines, planting thickly and treating them as follows will be found to have several advantages. Fewer fruit are produced on a plant, but the fruit will be better in all respects. We grow them in a span-roofed house 25 feet long by 13 feet wide, with a passage down the centre and a bed on either side, 3 feet 6 inches wide, about 14 inches deep, with a 3-inch flow and return pipe for bottom heat, and six 4-inch pipes for top heat. Although this amount of pipe gives plenty of heat, we use for the earliest planting a quantity of nice sweet hotbed material, previously prepared, put in the bottom of the bed, which raises the plants nearer to the glass and also affords nourishment to them. This is put in about ten days before planting in the form of a small ridge along the front to plant in, and sufficient to cover lightly the remainder of the bed.

When the plants are ready plant them not wider than 14 inches apart. Put a stake to each plant as the work proceeds, to support them to the first wire. When every other plant has got half-way up the house, or half the distance it is intended to train them, let this lot be stopped, which will be the means of inducing them to throw out fruit-producing laterals. The fruit on these should be impregnated as they appear. Setting is a very easy matter when Melons are grown in light airy houses: we find them to set at all times of the day, and we continue to syringe them when in bloom if the sun is bright. From the bottom wire to where we stop this lot is about 4 feet, and we generally take three fruit from each plant. The laterals are all taken off the other set of plants up as far as the others extend, but not stopping them until they get to the second wire from the top, being careful not to injure any of the leaves on the main stem. We find that we can cut fruit sooner this way, can get a more regular crop all over the house, and, we sometimes think, better fruit.

We have at present (10th of April) fruit as large as hens' eggs on those that are stopped half up the roof; while on those left to go to the top unstopped none of the fruit is set, and will not be for several days. Melons are always associated with heavy loam. Here we cannot have such without going twelve miles for it, so that it is very little we can get. The natural soil is light and sandy, but by adding large quantities of deer and cow manure we find it grows Melons well.

In choosing a male bloom let it be as large as possible and well expanded, when, if all other things are right, it will have a large amount of pollen, and be better in every way than a small one.

In cutting out the laterals let it be done with a sharp knife, so as not to injure the main stem in any way, as it is apt to canker when bruised.—A. H. T. (in *The Gardener*).

THE ROYAL HORTICULTURAL SOCIETY.

A Council meeting was held on the 7th inst., Lord Bury in the chair, and, much to his and his colleagues' surprise, the four vacancies caused by the resignation some time since of Sir A. Slade, Messrs. Chetwynd, Chambers, and Lindsay the Secretary, were filled by the election of Lord Lawrence, Mr. Grote, Admiral Hornby, and Dr. Hogg. It was believed that the four elected would serve, but we think Dr. Hogg will decline so doing. It is in contemplation, as evidence of approval on the part of the trade and amateur exhibitors, to give one of the most splendid shows ever seen in London.

How can Mr. Liggins make such an assertion as that in page 429, of the 3rd inst.? He states that "If ruin is the unfortunate fate awaiting us, the entire fault lies with the gentlemen who have left the present Council a legacy of debt beyond the power of any body of men to cope with," &c. Mr. Liggins was one of those who "turned out" the old Council, which numbered among its members some of the most experienced and successful men in London, who, with full experience of the Society's affairs, worked at its business as if it had been their own; and when they found it impossible to make the Society pay its way, negotiated with the Commissioners for an arrangement by which the Society would have been freed from rent, debenture debt, and have what was estimated to amount to £1000 in addition—that is, be some £5400 a-year better off than it now is. Mr. Liggins and his friends by strong assertions persuaded some horticulturists that the old Council had exaggerated the Society's difficulties, and that a new Council would set all to rights. We have seen the deplorable results, but I am happy to say that at last people lay the blame on the right shoulders.—George F. Wilson, *Heatherbank*.

INTERNATIONAL HORTICULTURAL EXHIBITION AT COLOGNE.

The following is an extract from a letter dated May 20th, received by the Royal Horticultural Society from the Committee managing the above Exhibition, inquiring "whether England might not, in the same manner as other foreign States, send to our Exhibition a complete collection of the produce of, and objects relating to, horticulture, to be exhibited separately, so as to give a correct picture of the advanced state of English gardening. France, as we are informed by the French Commissioner, Vicomte de Fontenay, will thus participate on a very large scale, so also Belgium and Holland, and we sincerely hope that England will follow the example set by these nations. We have, however, full confidence in our London Committee that it will do all in its power to procure a good English show."

The Royal Horticultural Society wish this communication to be generally known.

The Executive Committee have sent us the following letter, dated Cologne, May 31st:—

"Work is progressing steadily on the Exhibition grounds. The great flower and fruit hall is almost completed, and the hall for machinery will be ready in a short time. The foundations for the glass houses, eight of which have been already announced, are nearly finished. The ground has been prepared, and beds cut out for the Roses, flowers, and plants in general in the Exhibition ground adjoining the Flora. Some of the ground has been already planted, and we are happy to state that the plants are flourishing. The grass seed has been furnished by the well-known London firm of James Carter & Co.

"The Prussian Minister of Agriculture has placed at our disposal two gold and four silver medals of State. The Governments of Anhalt, Baden, and Saxon Weimar co-operate with us, and will be duly represented at the Exhibition by commissioners who have already been appointed. The Danish Government has also displayed warm interest in our undertaking, and there is every prospect of a large contribution from Denmark.

"The Government railways have agreed to a reduction of 50 per cent. on the ordinary rates of freight, as have also almost all rail and steam navigation companies. Much interest has been taken in the exhibition of fossil plants; contributions have been offered from all sides—from Government, private and public associations, and from mine-owners. Dr. Andrae, Professor in Bonn, is at the head of this department. Architecture and decorations will be represented by the most celebrated home and foreign firms. The announcements of machinery are very numerous, and the Exhibition will open to professional men as well as to amateurs many new inventions. We, in conjunction with the Minister of Agriculture, are about to select a jury for the prize distribution, and we hope soon to be able to prove to those interested that a sound choice has been made.

"The illustrated guide, together with catalogues, 50,000 copies of which will be published in due course, are in the hands of the Cologne firm of Rudolf Mosse. Foh. Bellstedt's firm in Bremen have undertaken all contracts for buildings.

"Belgium and France have arranged to exhibit each collectively, and the reports received from them are extremely favourable. We expect soon to be able to send a detailed report of the preparations made in Paris by the French Commissioners."

POROUS GARDEN POTS.

I always find my flowers grow better when the pots are kept clean washed. In many cases I have been asked by persons to tell them the reason why their plants never seemed to thrive. On examination, finding the pots dirty both inside and out, I have recommended them to wash the pots, and the result is generally satisfactory. When potting plants my custom is to wash well the inside of the pots with a scrubbing-

brush, using warm water and soap; afterwards to keep the outside clean, so as to allow of evaporation. Where the inside of the pot is not so treated the greatest difficulty is experienced in repotting, and where the outside is allowed to become dirty I have invariably found poor sickly plants. —Beta.

ALISMA PLANTAGO.

Selnom are hardy water plants vouchsafed a notice by the horticulturist, or their claims to cultivation pressed on the attention of the gardening public. Possibly it is that many of these plants are not stately in form, or gorgeous in colour, yet some of them possess both sweetness and beauty, and all are interesting from habit, or form, or properties. The plant we figure is not a brilliant plant, but it is not devoid of attraction, and it possesses a feature of interest by its medicinal and alimentary properties.

Fig. 107.—Alisma plantago.

It is commonly called the Water Plantain, and is found growing by the sides of streams in this and many other countries. It produces a long creeping rootstock, from which the leaves spring, and around which the roots are enveloped and gain support for the plant. It grows to a height of 2 feet, and bears white flowers, which are arranged in whorls or panicles.

Haller states that the plant if applied to the skin inflames and blisters, and it has been represented as poisonous if eaten by animals. Dr. Hogg in the "Vegetable Kingdom," states, that "Some years ago it was highly extolled as a remedy in hydrophobia, but after repeated experiments and a searching inquiry as to its effects, it was found to be perfectly useless." The same authority also states that the rootstocks contain starch, and when dried are eaten by the Calmucks. The plant thus appearing to lose its acridity by drying.

To those who enjoy a collection of hardy aquatic plants and wish to see the margins of streams and ponds interesting by vegetable life, this free-growing plant may be welcome. We give this information in answer to "Clericus," and in a form that may possibly be useful to others who may be interested in this somewhat neglected tribe of plants.

It is increased by root-division, or by seed sown in pots in sandy peat soil and immersed in the water. The flowers are larger than represented in the engraving, and are freely produced. The plant is of free growth, and may be left to take care of itself when once it is established.

Provincial Horticultural Exhibitions.—Immediately current are Leeds on the 9th, 10th, and 11th, and York commencing on the 16th inst. These great Yorkshire galas are usually good in extent, quality, and patronage. On the 16th inst. Burton-on-Trent and Jersey (Roses) offer liberal programmes, and on the same day the Glasgow and West of Scotland Horticultural Society holds its summer Exhibition at Glasgow.

BORDER FLOWERS—MORINAS.

One of the smallest, yet one of the most beautiful border plants we possess is Morina persica. It is said by some to be half-hardy, but I have proved it to be perfectly hardy, having had it fully exposed for at least a dozen years. I find the plants succeed in a thoroughly drained situation fully exposed, and the soil broken up to the depth of 2 feet. Good friable loam, sandy peat, well-decomposed hotbed manure, a little charcoal dust or coarse grit is a suitable compost. The border should be prepared some time before planting, to allow it to become firm. The plants should be firmly placed in the soil, and they should be well watered. They like a moderately moist, but not a wet, situation. When once well established they last a number of years.

They may be increased by division, but that sometimes proves injurious to their future well-doing, and I have known them after being wounded go off altogether. They seed pretty freely, often sow themselves where established, and may be removed at pleasure. The seed may be sown in spring, the young plants be grown on in pits or frames, and planted out in autumn or spring. They are well adapted for indoor decoration, and some should be kept in pots for that purpose as hardy herbaceous plants for exhibition. Why such plants are so seldom seen in our herbaceous borders I am at a loss to account for. Surely the time is not far distant when attention will be directed to their cultivation. We only have two kinds enumerated—I think we have room here for hybrids.

Morina persica, from Persia, is a very beautiful border plant and is the commoner of the two, but is scarcely met with in a day's journey. The flowers, being red and white, have a very pleasing effect. Morina longifolia, said to be from India, is of rather stronger habit but equally interesting, the flowers bearing a shade of purple. This species is somewhat of a rarity, and as a border flower it is seldom to be seen.—Veritas.

DIEFFENBACHIA BRASILIENSIS.

The woodcut and the following description are borrowed by us from Messrs. Veitch and Sons' catalogue of new plants introduced by them into their King's Road Nursery:—

"A very handsome plant with the well-known D. Bausei

style of growth. Its leaves average 18 inches in length by 8 to 9 inches in width. The variegation is very striking, the ground colour of the leaf being deep green, and the whole surface beautifully marked and mottled with smallish blotches of greenish yellow and white. It was awarded a first-class certificate by the Royal Horticultural Society, June 4th, 1873, and also a certificate of merit by the Royal Botanic Society, July, 1872."

By our early botanists this and other relatives would have been included in one or other of the genera Caladium or Arum. It now legitimately belongs to the genus named in honour of the German botanist M. Dieffenbach. It is one of the plants known in the West Indies as "Dumb Canes." "The Treasury of Botany" says, "The name of Dumb Cane in the West Indies is in consequence of its fleshy cane-like stems rendering speechless any person who may happen to bite them, the juice of the plant being so excessively acrid as to cause the mouth to swell, and thus to prevent articulation for several days. It is said that the West India planters were formerly in the habit of punishing their refractory slaves by cruelly forcing them to bite a piece of this plant; and accidents have occasionally occurred with it in this country, where, however, it is only to be found growing in the hothouses of the curious. The negroes in the West Indies make an ointment for rubbing dropsical swellings by boiling the juice of the plant in hog's lard; and a physician in the reign of Charles II. recommended the juice to be administered internally as a cure for dropsy, but it is so excessively acrid that it is almost impossible to swallow

Fig. 108.—Dieffenbachia brasiliensis.

it. Notwithstanding the acridity, however, a wholesome starch has been obtained from the stem. When the leaves are pulled away the stem has a cane-like appearance."

The Dieffenbachias are stove plants of considerable beauty. Their aspect when well grown is imposing, and they are a valuable addition to our fine-foliaged plants. They are admirable for exhibition purposes, and are fine for associating with Palms and Ferns. They are also adaptable for corridor decoration during the summer months. In culture they are very easy. Propagation is effected by cutting down the plants and inserting pieces of the stem in a sandy compost, and placing the pots in heat. The compost suitable for growing-on the plants is a mixture of turfy loam and peat, incorporated with sand and charcoal. When in active growth abundance of water is needed both at the roots and by the syringe. A gentle bottom heat improves the growth of the plants, and weak liquid manure improves the colour of the foliage. A high temperature, rich feeding, and copious supplies of water are the principal requirements to bring these noble plants to perfection. They are seldom injured by insects, but if affected the leaves should be washed with the sponge in preference to fumigation, which is injurious.

THE CUCKOO A CATERPILLAR-DESTROYER.

"West Surrey" (page 142), knowing no bird that will take the "filthy Gooseberry caterpillar," will be glad to hear of one, which, unlike sparrows, have no mixture of good and evil in its nature, and is welcomed alike by old and young, rich and poor. Logan draws a pathetic comparison of the joy expressed at the renewal of the well-known cuckoo note.

"Delightful visitant! with thee
I hail the time of flowers,
When heaven is filled with music sweet
Of birds among the bowers."

The cuckoo (Cuculus canorus) is a great devourer of the hairy

caterpillars, especially those of the tiger moth (Arctia caja), the stomach of the bird being lined with the hairs of the caterpillars; it has also a particular liking for the caterpillar of the magpie moth (Abraxas grossulariata), common to and committing great havoc in Gooseberry and Currant plantations. When caterpillars fail, the cuckoo has its food from the ground, frequenting newly-turned-up grass land or leys sown with a cereal crop, only too often seen looking yellow and patchy from the attack of wireworm and larvæ of the daddy-longlegs. Gilbert White mentions the cuckoo as seen by him catching the dragon flies disporting by a large pond, some of which it took whilst resting on the water plants, and others it caught on the wing.

For the past six seasons, without omitting any, I have seen the cuckoos take and clear the Gooseberry and Currant quarters of caterpillars. Shy the birds are not, for they occasionally come and remain when we are at work in adjoining quarters of the garden, but usually scrutinising their feeding-ground and adjuncts for foes before alighting from a neighbouring tree, and upon the approach of anyone flying away uttering their peculiar hawk-like cry of alarm, which is very different to their joy note.

For the last six seasons the Gooseberry and Currant bushes have been freed of caterpillars by the cuckoos. I hear of others having to water their trees overhead with a solution of white hellebore powder, 1 oz. to a gallon of water, which may be applied with a rose watering pot or by a whitewash brush sprinkled over the parts infested by caterpillars; this is rendered quite unnecessary here by the aid of the cuckoo. The Apple and Pear trees have the leaves eaten through and through by caterpillars, and the destructive "worm i' the bud" spoils the hopes of the rosarian. It is a gratifying and instructive sight to see the sparrow—house sparrow (Passer domesticus) passing from tree to tree, and from those to its nest, carrying in its beak the food which its young receive with joyous clamour. In this garden is a Scotch Fir prized for its age, hence it is privileged to appear so prominently within walls, and this tree is a favourite nesting place of the sparrow, and is at all seasons a favourite resort of these and other birds. It is to them no doubt a halting place, one that commands the surrounding ground, and is therefore advantageous as a "look-out." Chaffinches watch us from it sowing seeds; it is no use, the seeds are never sown without first being coated with red lead. Linnets use it, the blackbird and thrush giving their clarion notes perched on the pollard arms, which ring out sweetly on the still clear air. Hedged-in shrubberies, into which at dusk may be seen flocks of linnets, chaffinches, and sparrows descending, backed by plantations all around, and abutting a wood which extends east to west six miles in a valley with a rivulet meandering through mud or running through over rock; the whole spot is an aviary of native and migratory birds. A dabchick or little grebe (Podiceps minor) was caught last November in one of our stokeholes, which along with the preceding are given in evidence of the verdict not being arrived at through a paucity of material.

Of cuckoos I have seen six together. This year they seem scarce; I have not seen more than one, and only heard two. Doing no harm the cuckoo has no foe in man, but its approach is marked by some of like feather with marks of great disapprobation. If, as alleged, the cuckoo be a sucker of birds' eggs, there can be some excuse for the great clamour raised by the smaller birds upon the intrusion of one in, over, or near the nesting domain. This is not, however, any proof that the birds have instinctive knowledge of the cuckoo as a destroyer of their eggs, for they are equally ready with a cry and chase after the night-jar (which does not suck goats any more than hedgehogs do cows), or any bird in the shape of a hawk, driving the birds so tormented to seek refuge in flight. The missel thrush and blackbird are notoriously clamorous over the intrusion of a cuckoo to the nesting places. Equally uncertain is the finding of empty shells in bird-nests of the cuckoo being the content-takers. The jay and magpie are well known destroyers of eggs, but proof is wanting of the cuckoo being at all connected therewith.—G. Abbey.

The Preservation of Flowers.—A vessel with a moveable cover is provided, and having removed the cover from it a piece of metallic gauze of moderate fineness is fixed over it and the cover replaced. A quantity of sand is then taken, sufficient to fill the vessel, and passed through a sieve into an iron pot, where it is heated, with the addition of a small quantity of stearine, carefully stirred, so as to thoroughly mix the ingredients. The quantity of stearine to be added is at the rate of half a pound to 100 lbs. of sand. Care should be taken not to add too much, as it would sink to the bottom and injure the flowers. The vessel, with its cover on and the gauze beneath it, is then turned upside down, and the bottom being removed, the flowers to be operated upon are carefully placed on the gauze and the sand gently poured in so as to cover the flowers entirely, the leaves being thus prevented from touching each other. The vessel, is then put in a hot place—such, for instance, as the top of a baker's oven—where it is left for forty-eight hours. The flowers thus become dried, and they retain their natural colours. The vessel still remaining bottom upwards, the lid is taken off, and the sand runs away through the gauze, leaving the flowers uninjured.—(*Pharmaceutical Journal.*)

THE ARRANGEMENTS OF COLOURS

IN THE BEDS OF THE LONDON PARKS AND GARDENS.—No. 1.

LIST OF PERENNIAL PLANTS EMPLOYED.

Alternanthera spathulata
paronychyoides
major
amœna
spectabilis
magnifica
versicolor
amabilis latifolia
Achyroclina Saundersi
Agathea cœlestis
Ajuga reptans rubra
Ageratum Imperial Dwarf
Achillea umbellata
Cineraria acanthæfolia
maritima compacta
aspleeifolia
Convolvulus mauritanicus
minor
Centaurea gymnocarpa
ragusina compacta
Campanula turbinata hybrida
Chamæpeuce diacantha
Cerastium tomentosum
Coleus Verschaffelti
splendens
Dactylis glomerata elegantissima
Echeveria secunda glauca
metallica
glauca metallica
Fuchsia Golden Fleece
Funkia undulata
Gazania splendens
Gnaphalium lanatum
tomentosum
Geranium Robert Fish
Daybreak
Master Christine
Elegantissima
Rose Bradwardine
Little Golden Christine
Golden Pyrethrum
Helichrysum maritimum
Iresine Lindeni
Herbstii
Kleinia repens
Leucopbyton Browni
Lobelia speciosa
Blue King
Stonei
Bonnet
Omeo
White Perfection
Porcelain Brilliant
Mazarine Gem
pumila grandiflora
Oxalis corniculata rubra
Pachyphyton bracteosum
Stellaria graminea aurea
Sempervivum montanum
arachnoideum
Senecio argenteus
incanus
Teucrium Polium
Tagetes signata pumila
Viola lutea major
Purple Queen
Verbena Purple King
Sportsman

LIST OF ANNUALS EMPLOYED.

Amaranthus melancholicus ruber
Atriplex hortensis
Asperula azurea setosa
Alonsoa Warscewiczii compacta
Alyssum maritimum
Bartonia aurea
Clarkia alba
Clintonia pulchella
Celosia Huttoni
Eschscholtzia crocea
Godetia
Lupinus nanus
Marigold (French miniature)
Malope grandiflora
Nasturtium
Nemesia compacta
Nemophila compacta
Petunia
Phlox Drummondii
Saponaria calabrica
Seoecio
Viscaria

VARIATIONS AND NAMES OF COLOURS.

The various colours which now distinguish the foliage of different plants constitute some of the most striking phenomena of the vegetable world. Great is the variety of tints, which are peculiarly interesting, and are worthy the attention of every observer of nature. There is a wide field for investigation. Some think it a disease, but I think those bright and beautiful colours blended together as some are cannot be disease. The different colours of leaves and flowers, and the names to which those differences have given rise, are so many that the subject is one that deserves to be treated as a separate branch of science. This variety of colouring appears to me jointly to depend on the various structures of the leaf and on the different chemical actions to which those leaves are subject, some of them evidently depending on soil and situation, or from excess of heat or cold and causes hitherto unascertained.

Although this change in the colour of the leaves cannot as yet be explained, yet we know some of the laws that influence the colour of flowers. Blue flowers will turn to white or red, but never to yellow. A bright yellow flower will sometimes become white, but is never known to become blue. From whatever circumstances a leaf is subjected to change in colour there is one fact certain—it in most cases adds greatly to their beauty, and desirable acquisition for ornamental purposes. The different hues assumed in course of development, the bright

colouring appearing in many tints, forms, and shades, always contrasting with the natural green.

No variation of plants is more common than those of colour, and the colour of plants is one of the readiest marks of distinction. We find it scattered through all the classes of nature animate and inanimate, decking with tints of equal brilliance the shell, the gem, birds, beasts, and reptiles, clouds which attend upon the rising or setting sun, as well as our leaves and flowers, and with no apparent use but that of delighting and cheering mankind with a perpetual display of beauty.

This beautiful provision of nature has a power of imparting a charm to things the most trivial and otherwise unattractive, but there is nothing that strikes us so agreeably at first sight as the colour of flowers; it excites our admiration, and we are attracted by its loveliness and charmed with its beauty. The following are the principal colours, and the terms used to distinguish them:—When the margin of the leaf is yellow it is called folia aurea; when the centre has a yellow spot it is folia aurea variegata; when the leaf is white on the margin it is called folia argentea, or albo-marginata; when it is white in the centre it is called folia alba or argentea variegata; if the leaf is striped or streaked it is known as striata; if a leaf has two colours it is called bicolor; if three colours it is called tricolor; if the colours are various it is called versicolor; if spotted, maculata. Again, the leaves of some plants are blackish, when this is the case it is called nigricans; when quite black, ater; black with a tinge of grey, niger; copper-coloured, cuprea; very dark red approaching to black, atro-purpurea; reddish, rubescens; red-stalked, rubicaule. When the leaf is shining, like the Holly for instance, it is called nitida; velvety as seen in the Coleus and the Gesnereæ, it is called velutina. All those plants whose leaves appertain to black contrast well with colours appertaining to yellow or orange, also to silver-grey. As the surface colour of the foliage of different plants is very various terms have been used to describe them.

Again, some plants appear as if covered with a kind of white dust or powder, as the Auricula and the beautiful Echeveria pulverulenta, and E. farinosa; lucanus a silvery-white-looking substance covering the leaf, as the well-known Veronica incana and Santolina incana; Tomentose or Cottony, a white cotton-like substance covering the whole leaf.—Nathan Cole, *Kensington Palace Gardens.*

PLANTS FOR A GRAVE.

Observing in the Journal of 20th of May last a request for information on this subject, I offer a few remarks—results of a practical experience of the difficulties attending any permanent decoration of graves—difficulties so great, in fact, that I have no hesitation in recommending the total abandonment of the idea, unless exceptional advantages in individual cases may render the chances of success somewhat probable.

Most of the metropolitan cemeteries are established on a heavy clay soil, which in the winter is excessively damp if not actually waterlogged, and in the summer, should a few weeks of fine weather occur, the soil becomes parched and cracked. To such an extent does the latter condition often attain, that I have seen gaps of several inches in width between the earth and the coping of the grave, leaving the roots of the plants exposed to the drying influence of the sun, and causing their destruction or deterioration for the season. Another obstacle to any permanent decoration is the rapid growth of weeds, which will in the course of a few weeks entirely smother, and eventually starve out, the cultivated plants.

In such places the remedy is to have the staple soil entirely removed to the depth of 1 foot or more, and the space filled to overflowing (so as to allow for settling) with a compost of light loam and leaf mould, sharpened with grit or silver sand. In the case of an ordinary middle-class grave, say 6 feet by 1½ foot, with head, foot, and curb stones, the gardener attached to the cemetery will do this part of the business for a few shillings, and we may then proceed to plant many subjects with fair hopes of success.

The plants employed in such a limited space should be of dwarf and slow growth, or their appearance will in a short time be unsatisfactory. An example will, perhaps, be more generally useful than a selection of plants however carefully prepared. A very suitable effect may be produced thus, supposing we commence in the autumn:—Centre, a variegated Euonymus sunk in its pot, with a thumb pot inverted underneath for drainage. At each end a two-year-old plant of Iberis corifolia: this is evergreen, and makes a fine show of pure white flowers in May. Down each side next the coping a row of Sempervivum californicum, of which offsets struck now will make nice plants by September, and two dozen will suffice. At each corner plant half a dozen mixed Crocuses about 5 inches deep, and above the Crocuses the same quantity of Snowdrops (single) 3 inches deep. There will be space left for a few small plants of Golden Thyme, or a groundwork of gold-tipped Stonecrop (Sedum acre aurea).

This arrangement will look well until quite the end of May, when the Thyme and Stonecrop begin to turn green and may be taken up. The Iberis should have its flower stems removed and be slightly pruned-in, the leaves of the Crocuses, &c., will have died off, the Euonymus can be lifted, the ground levelled, and a fresh combination attempted. In the centre a plain cross formed of Golden Feather Pyrethrum (two rows of smallish seedlings are better than one of larger plants), and the intermediate space filled-in with Lobelia pumila planted very closely together will look well; or the cross may be of Echeveria secunda glauca raised a little, and the groundwork of Golden Feather sunk an inch or two. If the cross should be considered too "high," the same plants may be arranged as a ribbon parallel with the Sempervivums. Alternantheras and most of the dwarf succulents may be turned to good account in this style of planting. A small grave may thus be kept appropriately decorated with only two changes in the year; but if frequent visits can be made to it, the Golden Feather Pyrethrum will look all the better in the autumn for an occasional severe pinching-back to keep it down and prevent it flowering. The edges of the plants should also be cut into a tolerably even outline, and not be allowed to straggle and mix.

A larger or family grave may be planted with fuller-sized plants, and there being a greater body of soil, the extremes of heat and cold will not so much affect the plants as in the case of a small grave. Dwarf Conifers or evergreens, bulbs of all kinds, monthly Roses, and fine-foliage plants are admissible, and will do pretty well if properly attended to; but the most satisfactory plan would be to have the top spit of soil removed entirely, and the space filled with cocoa-fibre refuse in which to plunge the plants in their pots. Any amount of variety and any number of changes can then be made, and bulbs, such as Tulips, Hyacinths, and Polyanthus Narcissus, may be bloomed one season in the fibre without any pots, saving much trouble. The brown fibre brings out pleasingly the colours of the leaves and flowers, and is uniformly moist under the surface in the hottest weather. Almost any plant that can be grown and flowered in a pot will be available, and I know such a grave, which always looks bright and beautiful. It is in Nunhead Cemetery behind the chief chapel, and can be easily found.

In conclusion, I object to the decoration of graves with gaudy flowers, such as scarlet Geraniums and yellow Calceolarias (because in all well-kept cemeteries the principal walks are bordered with beds of such flowers), especially in the more retired parts of the grounds, where repose and quiet beauty should reign supreme, in harmony with thoughts of those whom we hope to join when we shall have planted our last flower, and gone to rest from our labour in "God's acre."—F. B., *Blackheath.*

ROYAL NATIONAL TULIP SOCIETY'S SHOW.

The above was held in the Botanical Gardens, Manchester, on May 29th, and the Show was remarkable for the high quality and condition of the flowers exhibited. Cheshire, Lancashire, and Yorkshire were strongly represented; and there were also growers present from Nottinghamshire, Derbyshire, and Warwickshire.

Tulips further south were over, and indeed several fine collections in the midlands were over also, or past their strength. The collection of our Hon. Sec., my friend Mr. Barlow, which I am not afraid to say is the richest and most select in the country, was unfortunately crippled this year by some extensive and dangerous injury to the bulbs at rooting time. The young fibres had, in countless instances, mysteriously refused to face the new soil. A slight layer from a hedgeside had been laid on for the bulbs to start in, and all, when once through this, did well. The diagnosis is difficult as to whether the affection is a sudden disease in a collection of long standing health grown by a safe old hand, or due to some unsuspected harm in that inch of innocent-looking soil.

Seeing that this is about the first time that affairs of the florist Tulip have been brought forward in the Journal, and many readers might be puzzled by technicalities in the prize

list, yet interested to know a little about the classification, points, and peculiarities of this most famous flower, I will briefly explain that our Tulip, which is a taller and later variety than any of the toy sorts so prettily played with in the garden game of bedding, has been classed by florists in three main divisions.

One class is termed Bizarres. These have yellow ground colours, and the marking is laid-on in black or red, and in many varying depths of brown. Another class goes by the name of Roses. Flowers in this have a pure white ground colour marked with rose, red, or scarlet. The third division consists also of white-ground flowers, but the marking here is in some shade of purple, from lilac to almost black: these are termed Byblœmens.

Each of these three classes is subdivided into two most important sections, depending upon the two recognised arrangements of the marking upon the ground colour. Either it is laid in beautiful styles of pencilling round the edge only of the petals, or else this pencilling is joined by bold beams of colour that rise like fireflashes up the petal-centre, and strike into the pencilling of the edge with their sharp tongues. A flower pencilled only is called a Feathered flower, and one that is beamed and pencilled is called a Flamed flower. The feathering must not break off anywhere round a petal edge, nor the flame be undecided, scratchy, or insufficient to strike to the feather.

The base of the flower must be pure yellow or white, as the case may be; and the stamens, upon which six bold black anthers stand, must be pure as the ground colour. Each flower is perfect at six petals and cannot be exhibited with more, though there are often blooms with seven or eight, and the shape is thus spoiled. Petals are to be broad, smooth on the edge, level on the top, and of fine polished surface and substance, so bending upwards from the base as to first form a good shoulder. The precise proportion for the cup of the flower has been a sorely vexed question. The practical solution is that we grow some rather long-cupped flowers, such as Queen of the North and Kate Connor, and also short-cupped flowers like Orion and Dr. Hardy, which last are of fine propertion in this respect.

In Tulips raised from seed a most curious fact is noticed: The young seedlings which may begin to bloom the fourth year after sowing, but more generally the fifth and sixth, will, with very rare exceptions all bloom self-coloured. At this stage they are selected for substance, shape, and purity, colour just now being of small moment, as only temporary. In this self-coloured state they are called Breeders, and season after season as they are grown now one and now another will "rectify," or "break" as it is termed, into feathered or flamed flowers, or some attempt at either. The classes they will belong to is a point decided by the base colour of the breeder, or by colour of base and petal considered together. If the base be yellow the flower is a bizarre, if white a rose, or byblœmen. Roses break from a white base, and pink, red, or scarlet body colours. Byblœmens form a white base and body of lilac, violet or purple. A seedling with lilac body and yellow base is worthless, for it will break into an inadmissible flower called a tricolor. It will have two ground colours—white and yellow, deriving its white through the byblœmen lilac of the breeder, and its yellow through its base as a bizarre. A red body and yellow base may be kept for the chance of a red bizarre, but as a rule, like the ugly duckling of the story, the young swan, the plainer and weaker colours in the breeder flowers generally produce the richest in the rectified state.

It is additionally strange that the breeder or mother colour is not simply driven or collected into beautiful markings on the rectified petals, but that it disappears from the flower altogether, as a mist or veil lifted off. The base colour floods the whole flower with its pure white or yellow, and a new and marvellous colour strikes in to feather or flame the petals. A few bloom "rectified" from the first, and are then said to have had no breeder. The separate bulbs of any one good seedling will some of them break feathered and some flamed, and others in neither one clear character nor another. Each bulb when broken transmits its own character to its every offset. This is the origin of "strains" in Tulips, for as each bulb leaves the breeder state it becomes the founder of a strain good or bad. Hence there is much in a strain as in a name in Tulips.

The breeders are a very lovely class of flowers. Among the roses especially there are the softest and most beautiful pinks and reds. There is nothing gaudy, rough or rude about the florist Tulips; and though we like to break the breeders out, we value them very much in their light unfigured morning dress. When they will break and how to break them no one knows, or probably ever will know. Many coaxings and hardships have been tried upon them, and many an eccentric experiment made. Change of soil and locality seem to do something—perhaps more than anything—towards breaking breeders, but all seems mystery, and every result past anticipating. This all makes the work wonderfully speculative and interesting; and when it is seen how long is required to bloom a Tulip from seed, and have it rectified from the breeder in a good strain, the prices that have been paid for Tulips will seem less excessive.

Nearly all that compete at our National Show and elsewhere are English-bred seedlings. We have left the Dutch varieties far behind, and the appearance of fine new rectified seedlings at the National has now become a most marked and interesting feature of the show. Many of us are raisers; and our worthy President, Dr. Hardy, now rests upon his Tulip laurels with the honour of having raised, in his Talisman and Ajax, two champion flowers in their classes.

It will, of conrse, be seen that the rectifying of good new seedlings is the way to improved and distinct varieties. When a breeder rectifies it always adopts a shorter stature and more refined habit. Some varieties diminish very much in height when their breeders break. The foliage of the breeders is a rich dark green with a fine blue bloom on it in which you might write your name. It is less vigorous when the bulb rectifies and shows, long before the bud colours, a mottling and streaking with lighter green—the habit of rectified Tulips, and a certain sign beforehand that breeders are broken.

For rectified seedlings special certificates of honour are awarded at the National, and several obtained the distinction this year. Among them—J. Forman, fea. byb.; Duke of Edinburgh, fea. biz.; Mrs. Cooper, a lovely fea. rose; Mrs. Plackitt, fea. byb.; Mr. Barlow's Little Annie, not open on the cold day of the Show, is a gem of the first water.

In the older and established new sorts the following were shown in grand character:—

Flamed Bizarres.—Dr. Hardy, Sir. J. Paxton, and Ajax.

Feathered Bizarres.—Demosthenes, Commander, Masterpiece, Duke of Edinburgh, Paxton, and Sovereign.

Flamed Roses.—Triumph Royal, M. St. Arnaud, Annie M'Gregor, Aglaia, Kate Connor, and Mabel.

Feathered Roses.—Heroine, Aglaia, Industry, Modesty, Mrs. Lomax, Charmer.

Flamed Byblœmens.—Talisman, and Duchess of Sutherland.

Feathered Byblœmens.—Bessie, Mrs. Cooper, Adonis, J. Forman, Mrs. Plackett, and Violet Aimable.—F. D. Horner, *Kirkby Malzeard, Ripon.*

Class 1.—*For four stands of twelve dissimilar Tulips*, two feathered and two flamed in each class.—1, Silver cup, W. Whittaker, with Talisman, Mabel, Lord Byron, Masterpiece, Paxton, Madame St. Arnaud, Duchess of Sutherland, Seedling, Violet Amiable, Industry, Bessy, and Dr. Hardy. 2, Rev. F. D. Horner, with Mrs. Cooper, Triumph Royal, Talisman, Bessie, Modesty, Demosthenes, Dr. Hardy, Kate Connor, Ajax, Adonis, Commander, and Heroine. 3, T. Mellor, with Heroine, Ajax, Aglaia, Paxton, Adonis, St. Arnaud, Sulphur, Charles X., Chancellor, Violet Amiable, Duchess of Sutherland, and Mabel. 4, J. Hague, with Mabel, Queen of May, Heroine, Orleans, Triumph Royal, Dr. Hardy, Ratcliffe, Paxton, Adonis, Dreadnought, and Ajax.

Class 2.—*Seven stands of six dissimilar Tulips*, one feathered and one flamed in each class.—1, W. Whittaker, with Bessy, Talisman, Sir Joseph Paxton, Masterpiece, Nanny Gibson, and Sarah Headly. 2, T. Haynes, with Duke of Edinburgh Heroine, Talisman, Triumph Royal, Mrs. Pickerill, and Sir Joseph Paxton. 3, Rev. F. D. Horner, with Annie M'Gregor, Bessie, Paxton, Commander, Talisman, and Modesty. 4, S. Barlow, with Annie M'Gregor, Bessie, Demosthenes, Paxton, Talisman, and Heroine. 5, — Forman, with Triumph Royal, Emma Brookes, Jemima Forman, Duchess of Sutherland, Merit, and Masterpiece. 6, W. Lea, with Adonis, Duchess of Sutherland, Triumph, Heroine, Dr. Hardy, and Masterpiece. 7, D. Barber, with Mary Barber, Sarah Headly, Paxton Feathered, Paxton, Talisman, and Mrs. Pickerill.

Class 3.—*Four stands of six dissimilar Tulips*, one feathered and one flamed in each class.—1, H. Housley, Stockport, with Sir Joseph Paxton, Mabel, Talisman, Unnamed, Aglaia, and Amiable. 2, W. Lea, jun., with Madame Arnaud, Heroine, Duchess of Sutherland, Adonis, Dr. Hardy, and Demosthenes. 3, S. Smedley, with Heroina, Triumph Royal, Sovereign, Talisman, Dr. Hardy, and Mrs. Pickerill. 4, S. Woolley, with Aylotte, Anastasia, Adonis, Dr. Hardy, and Catafalque.

Class 4.—*For six stands of three feathered Tulips*, one of each class.—1, T. Mellor, with Lord Lilford, Angelina, and Rachel. 2, Rev. F. D. Horner, with Friar Tuck, and Heroine, and J. Sanderson. 3, W. Lea, jun., with Heroine, Demosthenes, and Queen of the North. 4, C. Forman, with Sovereign, Heroine, and Jemima Forman. 5, T. Hague, with Duke of Edinburgh, Mrs. Pickerill, and Duke of Edinburgh. 6, W. Bentley, with Adonis, Madam St. Arnaud, and Masterpiece.

Class 5.—*For six stands of three flamed Tulips*, one of each class.—1, T. Hague, with Dr. Hardy, Duchess of Sutherland, and Triumph Royal. 2, W. Whittaker, with Paxton, David Orleans, and Angelina. 3, W. Lea, with Seedling, Dr. Hardy, and Triumph Royal. 4, T. Mellor, with Mabel, Chancellor, and Storer. 5, Rev. F. D. Horner, with Triumph Royal, Duchess of Sutherland, and Ajax. 6, W. Wiseman, with Dr. Hardy, Duchess of Sutherland, and Henrietta.

Class 7.—*Six stands of two Tulips*, one feathered and one flamed of any class.—1, W. Whittaker, with Masterpiece and Dr. Hardy. 2, C. Forman, with Mary Plackitt and Sir John Franklin. 3, T. Mellor, with Sulphur and Lord Denthsm. 4, J. Turner, Stockport, with Heroine and Paxton. 5, H. Housley, with Sovereign and Paxton. 6, C. Barnes, Birmingham, with Sarah Headly and Dr. Hardy.

Class 8.—*Single Blooms.—Feathered Bizarres.*—1, W. Lea, Masterpiece. 2, 5, and 8, W. Whittaker, Richard Yates, Sulphur, and Royal Sovereign. 3, 4, 9, and 10, Rev. F. D. Horner, J. Sanderson, Demosthenes, Seedling, Tiny Tim, and Garibaldi. 6, J. Hague, John Ratcliffe. 7, G. Pickerill, Sir J. Paxton. *Flamed Bizarres.*—1 and 4, T. Haynes, Sir J. Paxton and Lord Stanley. 2 and 3, W. Lea, Dr. Hardy and Seedling. 5 and 6, W. Whittaker, Seedling and Prince of Wales. 7, J. Turner, Ajax. 8, D. Barber, Ganymede. 9, J. Atkin, Sulphur. 10, Rev. F. D. Horner, Seedling. *Feathered Byblœmens.*—1 and 6, W. Lea, jun., Adonis and Seedling. 2, 4, and 8, W. Whittaker, Mrs. Pickerill, Violet Amiable, and Magpie. 3, J. Morris, Queen of the North. 5, J. Turner, Talisman. 7, S. Smedley, Firstrate. 9, — Barlow, Seedling. 10, D. Barber, Adonis. *Flamed Byblœmens.*—1, 10, — Barlow, Nimbus, and Seedling. 2, — Wiseman, Duchess of Sutherland. 3, D. Barber, Talisman. 4, 6, and 7, W. Whittaker, Bacchus, Lord Denman, and Alexander Magnus. 5 and 8, T. Mellor Thalia and Adonis. 9, — Haines, Queen of the May. *Feathered Roses.*—1, 2, 4, 7, Rev. F. D. Horner, Heroine, Modesty, Mrs. Lo-

max, and Aglaia. 3, 5, and 6, W. Whittaker, Sister to Rachel, Nancy Gibson, and Lady Wilton. 8, H. Houseley, Mrs. Lea. 9, J. Hepworth, Miss Collins. 10, D. Barber, Charmer. *Flamed Roses.*—1, H. Housley, Aglaia. 2, 3, 6, 7, and 10, T. Mellor, Mabel, Lady Catherine Gordon, Ada, Mrs. Talfourd, and Madame St. Arnaud. 4, W. Lea, Lady Olivia Sparrow. 5, W. Lea, jun., Mrs. Ashton. 8, J. Hepworth, Improved Triumph Royal. 9, Whittaker, Queen of England.

Premier—The best feathered Tulip in the whole Exhibition.—W. Whittaker, with Hepworth's Bessie. Premier.—The best flamed Tulip in the whole Exhibition.—H. Houseley, with Millison's Sir Joseph Paxton.

BREEDERS.

Class 10.—*For four stands of six dissimilar Tulips*, two of each class.—1, T. Mellor, with Lady Grosvenor, Alice Grey, Annie M'Gregor, Sir Joseph Paxton, and Norval. 2, W. Whittaker, with Ariosto, Talisman, Richard Yates, and Annie M'Gregor. 3, W. Lea, with Seedling Queen of England, Duchess of Sutherland, Seedling, Dr. Hardy, and Paxton. 4, Rev. F. D. Horner, with Talisman, Seedling, Hepworth Seedling, Lady Grosvenor, Richard Yates, and Hardy's Seedling.

Class 11.—*Six stands of three Tulips*, one of each class.—1, T. Mellor, with Annie M'Gregor, Ariosto, and Norval. 2, W. Lea, jun., with Duchess of Sutherland, Juliet, and Dr. Hardy. 3, D. Woolley, with Mabel, Delicata, and Ariosto. 4, W. Lea, with Seedling, Queen of England, and Richard Yates. 5, W. Whittaker, with Queen of England, Dauntless and Dr. Hardy. 6, Rev. F. D. Horner, with Hardy's Seedling, Dr. Dalton, and Unknown.

Class 12.—*Bizarre Breeders.*—1 and 6, T. Mellor, with Atlantic and Sulphur. 2, 4, and 5, W. Whittaker, with Paxton, Dr. Hardy, and William Wilson. 3, W. Lea, with Richard Yates. *Rose Breeder.*—1, 3, 6, T. Mellor, with Annie M'Gregor, Queen of England, and Mabel. 2, W. Whittaker, with Juliet. 4, S. Barlow, with Hepworth Seedling. 5, W. Lea, with Seedling. *Byblœmen Breeder.*—1, 3, 5, 6, T. Mellor, with Northern Light, Bridesmaid, Chancellor, and Wm. Bentley. 2, S. Barlow, with Seedling. 4, T. Richardson, with Unknown.

Class 13.—For the best breeder Tulip in the whole Exhibition, in addition to any other prizes it may have won.—T. Mellor, with Paxton.

STRAWBERRY PROTECTION.

An unusual show of blossom and an unwonted immunity from spring frosts lead us to hope for heavy crops of fruit this season. Than Strawberries few crops of the garden are anticipated with greater pleasure, and also, it must be added, with greater anxiety. The cool, refreshing, delicious fruit is ever welcome on the dessert and breakfast table, and the ripening of the outdoor crops is always longed for; but with this longing is mixed the fear lest dirt should injure, and slugs and birds eat, the best-flavoured and most handsome specimens. To best preserve the fruit and carry it to perfection is now one of the duties pertaining to all who are responsible for the full and satisfactory supply of this important crop, and a notice of the means usually employed at this period of the year to preserve and protect the fruit will not be inopportune.

As to preserving the fruit from dirt and grit various means are adopted, and it is not so much a question as to which mode is the best, as which is the most convenient for the adoption of each particular individual and the most suitable to his circumstances. Generally speaking the practice of surfacing the ground with manure in the autumn not only answers the purpose of protection from frost, and by the washings of the rains conveys nourishment to the soil; but this washing and bleaching also leaves a close, clean, strawy surface in the spring for the fruit to rest on, and from which it can be gathered in a clean sweet state. Than that plan few are simpler and better when carried out properly and under circumstances to which it is suited; but the plan is not always suitable. In wet soils the manure is liable to cause a decay of the crowns, and in gardens where slugs are unusually numerous the winter's surfacing affords them harbour, and they emerge from their haunts in the spring and destroy the fruit. However, where the practice has been adopted but little more is now needed on the matter of cleanliness, but where it has not been adopted measures must be taken forthwith, or a thunder shower of half an hour's duration may spoil the work of a season's preparation.

Whatever means are adopted for keeping the fruit clean, it is important that the material be applied at once. To defer the surfacing of the ground until the fruit is approaching ripeness is an error which is too often committed. The heavy fruit cannot be lifted to have straw put under without injuring the stems, the result of which is a check to the swelling of the fruit. The rough handling of the trusses is a prime source of small fruit, as the stems are as susceptible of injury as is the haulm of Peas. Protection should be given when the stems are erect, and before they are flattened to the ground by the weight of the fruit.

Mr. Douglas uses twiggy sprays to sustain the fruit above the foliage. The plan is a good one, but all have not the twigs, and a capital substitute is to stick three or four sticks round each plant, and run a strand of twine round each root, or if the roots are close, a strand along each side of the rows will suffice. That plan is simple and effectual. Bricks, tiles, or slates under the plants are also good for the purpose of cleanliness. Some have wire supports, which is simply a half-circle of wire on three legs. These are stuck in the ground—two half-circles to each plant—and form a capital supporting cradle. These are easily made, and will last for years. Short grass is used, but it fills the ground with weeds, and is dashed into the fruit by rains, and cannot be recommended. Tan is permissible, but better is fine shavings or trimmings from the basketmakers. Spent hops answer very well, and are successfully used in brewers' gardens.

We now come to straw, which is always effectual. The best way to use it, however, is in a cut state. If cut in inch lengths it is easily put round the plants from baskets; half the straw will do, and it is more quickly applied than when in an uncut state. It is, moreover, the best preservative of the fruit from slugs. The round loose particles are to them no sure foundation, and they cannot travel freely on the ever-moving surface. This useful plan was, I think, first suggested by Mr. Peach. Mr. Wright has also proved its worth, and stated its merits some time ago in the Journal. I can sustain both those cultivators in recommending it, having tested it against almost all other modes, and for quick and easy application, keeping the fruit clean, and baffling the slugs, I think it the best of all applications. The plants in the north are just going out of bloom, which is the very best time to surface the ground; but by all means let it be done before the fruit is half swelled off. Any of the above means will keep the fruit clean, and each can select the material which is most convenient to his own particular case.

And now as to protecting it from birds. Guns and scarecrows are of very little use, as the birds will in a few days make perches of them. The gun is the best deterrent—when it is there, but the birds are quick in detecting its absence. A quaint old cultivator procures cat's skins and stuffs them, and these dummies skulked about in the beds, changing their positions every day, is about as old-fashioned plan as any, and, although it may provoke a smile, it is one of the very best to keep the birds at a distance. A tethered hawk is also a capital Strawberry guardian.

But the general plan is to net out the birds. Herring net is cheap, and should be freely supplied to all fruit gardens, especially where ground is limited and every pound weight of fruit is an object. The common plan is to lay the nets over the plants, and remove them when the fruit is gathered; that plan will answer, but it is clumsy in comparison with spreading the nets over the beds at 5 feet from the ground. Stakes driven in at convenient distances, and roof laths tacked from stake to stake, is a framework which is quickly made, and over which the nets can be spread and pegged to the ground all round the bed. It is only to draw aside the net to gain admittance, and the fruit can be gathered in comfort. There is time saved in covering and uncovering, and the net is much less liable to rot than if laid on the plants. The framework plan of netting is, in the end, economical, and it is also comfortable and effectual. Gooseberry and Raspberry quarters can also be netted-in in the same way, and fruit, trouble, and labour will be saved, but for Strawberries especially it is the neatest, cheapest, and the best of all modes of fruit protection; at least, so far as is known to—A Northern Gardener.

CUT-BACK ROSES.

The question which Mr. Camm has raised as to whether the best blooms come from the maiden plants or those which have been cut back, is one which I am sure will greatly interest all Rose-growers, and will, I expect, provoke some amount of discussion and elicit many different opinions.

Having grown scarcely anything but cut-back Rose bushes for many years, during which as an exhibitor I think I may lay claim to a fair amount of success, I certainly must say that in my opinion the blooms from them both in form and quality far surpass maiden blooms, as there is an entire absence of that coarseness so often found in the latter, but at the same time there are some weighty arguments on the other side.

Cut-back bushes are much more liable to injury from late spring frosts, and they also require more care and trouble in their cultivation than maiden plants; the latter, if the ground is properly prepared before the stocks are planted, require very little attention except as regards keeping them free from fly, and of course the usual tying and disbudding; but if you want

fine blooms from cut-back plants you must not forget to treat them liberally with some of that "mock turtle" which Mr. Reynolds Hole so well says "never fails to act as quinine and Guinness to the weakly, and a generous wine to the strong."

Another and a very great objection, more particularly to an exhibitor, is that Manetti plants—and I speak more particularly of them—must be pruned early. The stock is so excitable that if you prune late they bleed, and in most instances die back; the consequence is, that with a forcing season like the present your bloom comes too early for many of the principal shows, as I almost fear will be my case this year, notwithstanding my good friend Mr. Camm's kind prophecies on my behalf. Now with maiden plants I should pinch back one-half of them as soon as they have fairly started into growth, and thus ensure a continuance of fine bloom for a much longer period.

My answer to Mr. Camm's question, then, is this, that in form and quality cut-back blooms are most decidedly superior to those from maiden plants, and this I say not forgetting that the very best box of blooms I ever saw in my life was a box of Horace Vernet shown by Mr. Cranston at Hereford in 1873, and they were all maiden blooms—they were simply superb. But my advice to Rose-growers, and more particularly to exhibitors, is that they should do as I hope to do for the future. Grow some of each; grow your plants one year as maidens, the following year cut them back and then have done with them By dividing your Rose ground into three divisions this can very well be done, as there will be one portion for the stocks, Manetti or Briar whichever is preferred—and I strongly advocate the former—another for the maiden plants, and another for cut-back plants, and if this plan is carried out I am sure the exhibitor will have a succession of bloom which will last him from the earliest show until the latest.

I cannot conclude these remarks without saying a word in praise of that glorious Rose Cheshnut Hybrid, which was raised by Mr. George Paul. Of it being a pure Tea Rose I have grave doubts, but I could stage twenty-four blooms of it now which I am sure, for form, colour, and substance would hold their own against any other Rose that I know. I would strongly recommend all growers who have no plants of it to procure some and plant them against a south wall, and they will have something of beauty which will be to them "a joy for ever."—Robert N. G. Baker, *Heavitree.*

NOTES on VILLA and SUBURBAN GARDENING.

The Primula, Cineraria, and Calceolaria.—Perhaps there are no more suitable plants to call an amateur's attention to than the above, for with these three beautiful plants fairly grown he may secure to himself a goodly share of bloom from Christmas up to the middle of June, and neither are these plants of that nature that will call into request an amount of skill beyond the amateur's attainments; the treatment they require is plain and simple, and it is certain they will pay for the pains taken with them.

Primulas.—Of these there are several strains of more or less variation in colour, and some of a semi-double character, which no doubt are more lasting when cut than some others, but I confess to having a liking for the old Fimbriata rubra and alba, red and white, or such as market gardeners bring into Covent Garden at Christmas time and onwards. These are such as the amateur will not be disappointed with. Seed can be purchased mixed or the colours separate, which is perhaps the best way to buy for a more perfect strain. For blooming at Christmas the seed should be sown without delay, and those who already have their plants up will perhaps have a slight advantage; nevertheless, sow at once in a pan or pot of well-drained soil, say sandy peat run through a fine sieve, cover the seed very lightly, press the soil slightly over the surface, water it at once, and place a thin layer of moss over it to prevent the sun from drying the surface too fast; place the pots in a frame where Cucumbers or other plants in a similar temperature are growing. By no means allow the soil to become dry, especially after the seed has commenced germinating. When the seedlings have attained a couple of seed leaves large enough to handle properly take them up by the root carefully with a pointed stick, and prick them an inch apart in pots filled with a similar soil; keep them in the same temperature until they have made at least three leaves, with one or two others showing, then they will be fit to pot off separately into small pots, adding this time with the peat a little turfy loam, and let them be mixed well together.

In potting take care that the plant is placed just low enough to be held in its place by the soil to prevent the plant falling about. This time the plants may be placed in a small frame, on a bed of ashes if possible, and near to the glass. When the plants show themselves established give them more air, but still an intermediate temperature, with occasional sprinklings of water over the foliage in the evenings of hot days. As the plants grow on a slight shade will be necessary, and as the pots become full of roots give other shifts till they occupy the sized pot required, which is generally a 6-inch pot. When the plants become strong the soil may consist of mostly turfy loam and sand, with about a quart of dried cow manure finely sifted to each two gallons of earth. Should the loam be of a heavy nature a little leaf soil mixed with it will be better than peat to lighten it, but if not heavy do without the peat. Such soil will grow them well. After the plants have had their last shift the frame should be placed upon bricks, so as to admit air beneath as well as above them; this greatly strengthens them, and induces the leaves and leafstalks to become short and sturdy. Do not let the plants remain too long in a dry hot atmosphere without sprinkling the soil around the pots, and when the weather is warm and the plants strong allow them to have air night and day, little or much according as they may be going on. Turning now to the

Cinerarias, I may say that these are sown the same way, and afterwards grown in a precisely similar manner as the Primulas, and in the same sort of soil; in fact I generally mix up soil for the three sorts of plants at one time and all alike, and I have found these do well with it after a trial of some years. For the Primula it used to be the rule to use peat and leaf mould for reasons I cannot understand, as I could not produce that sturdiness of growth and flowering qualities so necessary to these useful flowers, and somehow or other they so very frequently rot off at the neck of the plant; and, again, a mixture of this nature soon became soured and quite out of a state for plant growth.

The Cineraria is improved in health and vigour if a little charcoal dust is mixed with the soil, and when the plants are in their last shift they will do better than in frames if the plants are stood in a shady border or a bed of coal ashes; this will be in the months of August and September, when they grow rapidly. With regard to the sowing of the seed, for very early plants they ought to be well advanced by this time, say good plants in 60-sized pots; but for small useful decorative plants the seed should now be sown, and they will be good plants by the autumn. As to the

Calceolaria, this is a somewhat hardier sort of plant, and the latter end of July is a good time to put in the seed. No heat is needed for these, but after sowing the seed and treating the seedlings similar to those directed above, they may be placed in a handlight in a shady corner, the pot or pan standing clear from the ground to prevent slugs reaching the seedlings, for which they have a special liking. These being very small, a little more pains will be necessary in pricking them out, so as to ensure their being fastened in the soil. Calceolarias do not grow fast at first, but when once established, and during the winter months, they make rapid progress. These as well as the Cinerarias must not be allowed to become potbound until they occupy the flowering pot. Again, the Calceolaria must have the centre shoot taken out in the spring; this allows the side shoots to come along, which form the plant. They, too, like frequent sprinklings of water over the foliage when in a greenhouse temperature, and just before the plants have attained their growth a little weak guano water may be given them three time a-week, and both in winter and summer let the plants stand upon a moist bottom.

The plants are much more liable to suffer from dryness than damp, and they should always be kept as near the glass as possible, and in a temperature of 45°, or even less, they grow very fast. The Primula flowers in winter and spring, the Cineraria follows closely, and the Calceolaria in May and June. —Thomas Record.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

KITCHEN GARDEN.

The continued drought is telling upon all crops. Even the Potato plants in the fields are far from satisfactory; the segments of the leaves are curled-up instead of being spread-out stiff, as they usually are in quite healthy plants, and unless copious showers of rain fall soon it will be a serious matter for those whose living depends on their crops. The total rainfall at Loxford so far for this year been but 6.65 inches, and 2.29 inches of that quantity fell in January.

As the earliest Peas and Potatoes were quite at a standstill they had a good soaking of water. In watering Peas the water should not be applied with force to the stems, as this treatment is apt to injure the plants. The best way is to draw a drill close to the rows, and to fill the drills twice with water; the moisture will permeate the ground from each side of the rows sufficiently to moisten it where the roots are. After watering it is best to mulch the surface of the ground with rotted manure. If this cannot be done the drills referred to may be filled-in, which will arrest evaporation.

It is bad policy to apply water to any of the out-of-door

crops, and then to leave the surface to be acted upon by the sun; indeed, much injury is done to plants that have just been put out if water is applied with force from a coarse rose. The surface of the ground, even after the first application, is made impervious to atmospheric influences, and future waterings will make matters worse. In the first instance the watering should be done in a careful manner. If there is but little to do and plenty of time to do it, a fine rose may be used on the water-pot, as the more gently the water falls on the ground the better, but in nine cases out of ten it is necessary to push through the work as quickly as possible, and a coarse spreader must be used. The operator ought to keep his hand low, raising the bottom of the pot just above the ground, which will cause the water to flow gently. Mulching is certainly the best preventive of evaporation. Where this is not possible, the Dutch hoe run through the ground when the surface has partially dried is beneficial.

Planted-out Brussels Sprouts after watering the ground. It is much better to plant at night, so that the plants are in the ground at least twelve hours before they suffer from the sun; it is also worth the trouble to sprinkle them overhead two or three times a day. Salad crops, especially Lettuce, should be well supplied with water. The hoe ought to be kept at work wherever there is any appearance of weeds. It is not possible to use the hoe too much.

PINERIES.

Those who were fortunate enough to obtain good suckers last month and potted them as directed, must now see that the plants are kept growing. Pines do not show the effects of bad treatment so soon as many other plants, but they do suffer nevertheless. Very little artificial heat will be required now. The house ought to be shut up at 5 P.M., or even before that, much depending upon the position of the house, the construction of it, whether span-roof or lean-to, and other circumstances. It is absolutely impossible to lay down a hard-and-fast rule. Take an illustration: Some houses here have an aspect south-east; these are lean-to's, and the sun is off them before 4 P.M. They may be shut-up at that hour, whereas if they were south-west the sun would act upon them until six, or a span-roof running north and south would catch the morning sun at 5 A.M., and the setting rays at 6 P.M. In the last instance a little air should be admitted very early in the morning, and the house ought not to be shut-up altogether until six at night. Pine houses ought to be fired freely during the next three months. We have not put up any shading yet in the fruiting house, as the plants do not seem to require it. Fruit that is ripening ought to be very slightly protected from the midday sun. Abundant supplies of moisture ought to be kept up by evaporation in the succession houses.

CUCUMBER AND MELON HOUSES.

Our Melons are rather late this year; the seeds were sown about the middle of January, and the earliest fruits are now just on the point of ripening. In other seasons we have had the fruit ripe about the third week in May; the same night temperature has been kept up, so that the reason must be found in a lower day temperature. In forcing it matters little how cold the nights are, this can be overcome by using more fuel, but no amount of artificial heat can balance the want of sun. In a clear day the temperature rises in a few minutes 10° or 15°, and by judicious air-giving it may be kept up. Red spider, owing to so much artificial heat, has been prevalent, but has been easily kept under by syringing. The only evil that results from the use of the syringe is this—the water runs down to the base of the stem, is conducted there by the main stem itself, and not unfrequently the plants die off at the neck. This does not happen when the plants are put out on a raised mound like a molehill. The fruit is not left on the plants until it is fully ripe, but is cut and removed to a cool fruit room to ripen.

The Cucumbers up to the end of May have not been so productive as in previous years. We fancy that the character of the soil used to plant them in had more to do with this than the weather; it was light sandy loam, and what had been used previously was of a more clayey character. The roots speedily exhaust the mould in which they are growing, and must frequently be reinvigorated by rich surface-dressings. The plants must also be looked over about once in a week or ten days, and the growths thinned out; all old growths must be cut out and be replaced with young shoots. Syringe twice a-day, and sprinkle water about frequently. As much air as possible ought also to be admitted, but cutting winds must be avoided.

Figs in pots require similar treatment until the fruit shows signs of ripening, when the syringing must be discontinued. The pots also require to be surface-dressed with rotted manure and loam in equal proportions. Oranges grown for dessert purposes in pots, if the plants were not repotted in the winter, must also be surface-dressed. A mixture has been used here the last two seasons that acts like magic; it is composed of yellow loam, pounded charcoal, guano, and bone dust in equal proportions. The mixture is spread thinly on the surface of the pots, and is washed down by the waterings; sickly foliage assumes a deep green colour in ten days after the application. The trees are now syringed twice daily, the temperature of the house is the same as for Pines.

PLANT STOVE.

Climbers are apt to occupy too much space. When planted out as ours are, they shade the plants too much; and some of them, such as Clerodendron Thomsoniæ, shower down withered flowers on the plants beneath, and the decaying flowers cause decay on the leaves of valuable plants. Of course all this is avoided if due attention is given to the plants. Nothing is better than the Clerodendron as a roof plant, it has been the admiration of all visitors on entering the stove; the leaves are also offensive to insect pests. The blooming period is nearly over, when all the old wood will be cut out and be replaced with young growths. With the above may be named Bougainvillea speciosa. Many persons admire the large showy flowers of Allamanda Schottii; it requires plenty of space, and must be syringed to keep down red spider. The plants in pots have required abundant supplies of water and much moisture in the atmosphere to counteract the effects of the drying winds.

ORCHID HOUSES.

It has been necessary to open the front sashes on very hot days, as sufficient ventilation has not been obtained from the roof. Draughts are avoided by having permanent canvas shading nailed to the top and bottom plates. In this way all the air that is admitted passes through the canvas. It is not so on the roof; the canvas there confined the air, and sufficient was not admitted. The lath to which the canvas was attached has been brought down about 9 inches; this space being left quite open has much improved the atmosphere of the house.

We have placed Phalænopsis grandiflora and amabilis in fresh baskets. This class of plants require considerable supplies of water, and the sphagnum in the interior of the baskets is apt to become sour. This can either be removed by carefully picking it from amongst the roots, and replacing with fresh material if new baskets are not required. If it is necessary to use larger baskets the plants must be removed very carefully, and all dead and decaying roots removed; plenty of potsherds must be mixed with the chopped sphagnum used to fill the baskets. The moss ought also to be fresh, as the plants do not succeed well if that is not in a growing state.

In the cool house many Odontoglossums are starting into growth, and most of them have been repotted. These with Masdevallias and other plants may be syringed overhead if it can be done without injuring the flowers. If the cool Orchid house is exposed to the sun double shading is necessary to keep down the temperature.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Messrs. E. G. Henderson & Son, Wellington Road, St. John's Wood, London.—*List of New Plants and General Catalogue.*

William Rollisson & Sons, Tooting.—*General Plant Catalogue.*

Louis Van Houtte, Royal Nurseries, Ghent, Belgium.—*Catalogue of Stove, Greenhouse, and Ornamental Plants.*

HORTICULTURAL EXHIBITIONS.

SECRETARIES will oblige us by informing us of the dates on which exhibitions are to be held.

BURTON-UPON-TRENT.—June 16th. Mr. Wm. Shave, Bond Street, Sec.
JERSEY.—Roses June 16th, Autumn October 13th, Chrysanthemums November 10th. Major Howell, Spring Grove, St. Lawrence, Hon. Sec.
YORK.—June 16th, 17th, and 18th. Mr. Jno. Wilson, 13, New Street, York, Sec.
GLASGOW.—June 16th, September 8th. Mr. F. G. Dougall, 167, Canning Street, Sec.
EXETER (Rose Show).—June 18th. Mr. T. W. Gray, Queen Street Chambers, Hon.-Sec.
FAREHAM.—June 23rd. Mr. H. Smith, Sec.
STOWMARKET.—June 24th and 25th. Mr. S. Prentice, Hon.-Sec.
REIGATE (Rose).—June 26th. Bushby Britten, Esq., Hon.-Sec.
CRYSTAL PALACE COMPANY.—Rose Show, June 26th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.
WISBEACH.—June 30th. Mr. C. Parker, Hon.-Sec.
MAIDSTONE.—(Roses), June 30th, at Vinters Park. H. Banstead, Esq., Hon. Sec., Rose Club, Mill Street, Maidstone.
NORFOLK AND NORWICH HORTICULTURAL SOCIETY.—Rose Show, June 30th. E. A. Field, Hon.-Sec.
BIRMINGHAM.—July 1st, 2nd, 3rd, and 5th. Mr. Quilter, Aston Park Sec.
SPALDING.—July 1st and 2nd. Mr. G. F. Barrell, Hon.-Sec.
BROCKHAM ROSE SHOW.—July 3rd. Rev. Alan Cheales and Charles Mortimer, Esq., Hon.-Secs.
SOUTHGATE.—July 3rd. John Miles, Esq., Hon.-Sec., Southgate, N.
GRANTHAM.—July 6th and 7th. Schedules, &c., from Mr. Lyne, Bookseller.
DURHAM AND NORTHUMBERLAND.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.
WINTERTON.—July 7th and 8th. Mr. McCallum, Sec.
FROME (Rose).—July 8th. Mr. A. R. Baily, Hon.-Sec.
KILSBY.—July 8th. Sec., Mr. C. E. Bracebridge.
RICHMOND.—July 8th. Mr. A. Chancellor, Hon.-Sec.
NOTTINGHAM.—Rose Show, &c., July 8th, 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.
OXFORD (Roses).—July 9th. Mr. C. R. Ridley, Hon.-Sec.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Royal Horticultural Society's Show (*W. E.*).—Our reporter necessarily was there early, and the prize cards were not all placed. Those who ascribe motives usually betray themselves. There was, further, a misplacement of cards; for instance, the exhibitor's card attached to bunches of green Muscats was removed altogether.

Summer-pruning Plum Trees (*R. M.*).—All the shoots which grow more than an inch or two ought to be stopped at the third leaf, pinching off the point of the shoot when it has made that number of leaves; but the short stubby shoots are not to be interfered with, but left their entire length, providing the growth of this year does not exceed an inch or two. When that is exceeded cut them back to three leaves. The leading shoots or continuation of the branches are not to be stopped, but trained-in their full length. If shoots are not wanted for extension, the space being covered, stop the shoots from their extremities the same as the others.

Rose Leaves Diseased (*E. L.*).—They are affected by the orange fungus, Puccinia rosæ. The remedy is to dust over the leaves with flowers of sulphur.

Clematis (*E. B.*).—Miss Bateman (white) and Albert Victor (deep lavender) are both of them beautiful varieties; either of them will suit you.

Peas (*H. S. F.*).—We have no sample of Peas from you.

Mr. J. Coomber.—Our report states your direction correctly, Highgate. It is the Royal Horticultural Society in the advertisement of prizes states erroneously Reigate.

Strawberry House (*Infelix*).—We do not approve of your proposed house as represented by the sketch, for the plants will be at too great a distance from the glass, and deprived of the air playing freely around them, which is essential for the well-doing of forced Strawberries. A half-span with the ends pointing east and west, fitted with shelves to suit the pitch of the roof, which should be a sharp one to admit of watering the plants from the back, and these shelves having soda an inch thick reverse side down, will last a season. In vol. vii. of the *Journal of Horticulture*, page 354, is given a section of the Strawberry house at Enville, and a house of this kind we advise in preference to your proposed one, which we feel sure will not answer for the purpose of early fruit, which is most desirable.

Dendrobium nobile (*Subscriber*).—That is the name of the Orchid which you sent us. It is not possible to flower it in winter with a night temperature of 50°; but it will flower in April or May. Give the plants abundant moisture during growth, and when the growth is complete gradually reduce the supply and expose the plants more fully to light and air, so as to thoroughly ripen the growth. In winter keep dry, affording moisture only to keep the stem from shrivelling. Poinsettia pulcherrima may be flowered successfully in a house with other means, such as frames, for forwarding the plants.

Melons Swelling Irregularly (*F. H.*).—It is a consequence of the fruit being upon one primary vine, the sap not being equalised. It may be obviated by having more than one primary shoot to a plant—as many to each plant as you wish fruit. Your gardener will meet your wishes if you explain them to him. We take three and four fruits from a plant, and by having each fruit upon a principal vine we experience no difficulty with the swelling.

Tricolor Geraniums (*M.*).—You probably grow them in a very airy dry house, which they do not, especially at this season, do well in. Give them a frame or pit, and a distance of about a foot from the glass, watering moderately, shifting into larger pots as required, but not giving large shifts, admitting air moderately, and affording slight shade from bright sun.

Rose Leaves Brown (*S. F.*).—The root action is defective. Water the roots copiously with tepid weak liquid manure, and keep mulch over the surface of the soil.

Liquid Manure of Fowl's Dung (*E. G. G.*).—For culinary vegetables mix a peck of the dung with thirty gallons of water, and for flowers twice that quantity of water.

Rose Leaves Brown-surfaced (*S. C.*).—No insect causes the mischief, but defective root action. See our advice to another correspondent.

Radishes in Hot Weather (*Gardener, Croydon*).—Sow as usual the oval-shaped scarlet, and water plentifully every day.

Tarred Cord (*Mrs. M.*).—It is not injurious to plants tied by it.

Tree Ferns from New Zealand (*S. J. R.*).—Write to Mr. Stevens, auctioneer, King Street, Covent Garden.

Potato Fungus (*P.*).—The Potato plant had the well-known fungus upon it in small quantities, but the specimen was very bad. The *odour* itself is quite characteristic of the *presence* of the fungus.—W. G. Smith.

Grubs at Strawberry Roots (*C. J. H.*).—We have nothing to add to the reply we made. Your hand-picking was very successful, and if every sufferer would do the same extermination would be nearer effected.

Insect Pests (*Adams*).—The discoloration of your Bean leaves is due to the presence on their under sides of a species of thrips.—I. O. W.

Insects (*R. H.*).—Jefferson Plum. A moth is parent of the maggots. The Coddling Apple insects are green flies, aphides, and so are those on the Damson leaves.

Names of Plants (*C. M. M.*).—The Elder is Sambucus laciniata, or Cut-leaved. We cannot name varieties of florists' flowers. (*D. Drake*).—Yellow one, Trollius europæus; white, Saxifraga Gmelini or hypnoides; the tree, Platanus orientalis. (*A. T.*).—The plant you have raised from seed of the Locust fruit is probably Hymenæa latifolia, Broad-leafeted Locust Tree.

POULTRY, BEE, AND PIGEON CHRONICLE.

POULTRY AT RAILWAY STATIONS.

At least once a month we read or hear of some wretched bird which has been mutilated in its plumage on its way to or from a show. It has its tail pulled out, or it loses some feathers in some particular place, or it has something overturned on it which spoils its plumage, or it is shaken up and knocked about, and so becomes seedy. Then long faces are pulled, and secretaries are blamed, and certain parties are suspected, and all kinds of suspicions are vented on innocent heads. We have an idea—it may be an idea only—that much of this mischief takes place at railway stations. We do not mean that it is done by railway officials purposely—far from it; but we believe that often baskets arrive at stations swaddled-up in linen and canvas, labelled "with great care" and "live birds." Well, we fancy, perhaps our good railway servants are sometimes seized with a craving—they may be amateur fanciers themselves, or may have friends in the fancy line—to see the inmates of such baskets, and, with purely good intentions, let the birds have a run in the office, giving them exercise and at the same time the said officials opportunity for inspecting the birds. We do not for a moment wish to be misunderstood. Doubtless there are some few evilly-disposed individuals who would pluck out a bird's tail if they came across it, or shake it up to prevent his or her winning, and doubtless such things are done, but such customers we think and hope are few and far between; while we happen to know that mutilations of plumage do occur at railway stations, especially junctions, where birds have to stay sometimes several hours, and it is at these places we believe that many of the birds lose their plumage, and are consequently prevented from winning. Not purposely—far from it, but simply from the hands of people who, having opened a basket to see the contents, are unable to put them back again, and in the desire to do so speedily a scuffle ensues, and the bird proceeds on its journey having, like the memorable "Bo-peep," left its tail behind it.

To show that such things are done, and that we are in a way warranted in coming to the conclusion we do, we will quote two or three cases which have come under our own eyes, and which at the time we felt should have been shown up. Still, as the day is past we will not give now the places' names, but merely narrate the facts. So firstly, then, we happened one day at the end of November to be staying at a large station hotel in a midland county. We strolled on to the platform for an evening paper. It was the vigil of the Birmingham Show. As we passed the parcels' office we heard a peculiar sound as of some bird cackling, as they do when pursued. We happened to know the clerk a little, and so in we went. One peep round showed us how the matter stood. There was an empty basket on the floor, there were five or six porters looking on, and there was a clerk running here and there chasing a Spanish cockerel. It flew on the shelves, it flew on the table, it flew over the men's heads. We had no idea Spanish cocks were so wild, we ventured to say. "No more 'ad we," said one of the men there assembled; "we only took the beggar out to look at him and give him a run. He has come all the way from Somersetshire, and now he kicks up this row." Just at this moment the chasing clerk made a dab at the chased cockerel and seized him by his sickles; out they came, and away the bird was off again. At last he was caught and replaced in his hamper and forwarded to Bingley Hall, where he was highly commended, and we do not hesitate to say he would have been in the list but for his absent and seriously ruffled remaining feathers.

Once more: we were at a great junction the day before the Northampton Show. At the said junction there was on the platform a pile of baskets waiting to go on to the Show. At the top was a peculiarly striking one. It was of white wicker, and had a broad green stripe round it [who recognises this?]. This struck our eye, and so it seemed also that of one of the bystanders. He seemed wild to see the contents of the green-striped basket. He peeped in at the sides, and he peeped in at the lid, but apparently he could not satisfy his longing eyes, so he gave one tremendous tug to the lid to have a good satiating look, and in a moment out flew a Duckwing Game cock. It was off like an eagle. The porters chased it, the people chased it, and on it flew till it got outside the station, and escaped into a field. The train steamed in, and the train steamed out, taking with it all the pile of baskets, but leaving behind one empty—a white one with green stripes, and when the cock was recaptured the last train had gone, and the emerald-barred casket was "too late for exhibition."

Again: we ourselves were taking some birds to a show. We had to wait at a junction, and we seized the opportunity for taking "a glass of bitter, if you please," having previously

placed the birds in the office. The refreshment ceremony over we returned to our baskets. Ah! some one making an aperture between the lid and the side to get a view of our cup-winners to be. How short-sighted he must be! he seems to want to get his whole head in, we thought. Ah! in goes a stick. A dab here and a dab there, and out it comes again. We lay our hands gently on the individual's arms, and beg to know the cause of his anxiety. "We saw a hegg." Quite right to say *saw*, for it was not then to be seen! The porter, a poultry-fancier in embryo perhaps, had seen the egg. Perhaps with a three-minutes-boiled dainty in his eye for breakfast, perhaps with a hope of obtaining a cup-winner, this servant of the railway had made several grabs at the egg, and in his endeavour to fish it up, or, perhaps, only to get it in better perspective to see its colour (?), had broken it, and the inhabitants of the basket quietly allowing the contents of their produce to foul their plumage and stick their feathers together lost the cup, as we were afterwards told, "for want of a washing."

We could quote more cases, but enough. We have shown that we ourselves know of a bird losing its tail, of a bird being too late, and of a bird being dirtied in his plumage. In each case the mischief was done at a railway junction close to the neighbourhood where the show was to take place, and done unintentionally. We know of no remedy that we can suggest to be really effective; we merely name these cases to show that exhibitors must not always think when the plumage of their birds is injured that it is done purposely by some jealous fellow exhibitor to prevent its winning.

There have been several new baskets invented of late with curtains and fittings to prevent the inmates being touched, and we strongly advise the use of them to those exhibitors who do not personally take their birds to shows or send them with their servants; and we also think the plan Mr. King, the worthy honorary secretary of the Oxford Show, suggested and, we believe, carried out, a good one—viz., of sending some responsible men on the day the birds are due at the show to the chief neighbouring junctions, that they may keep an eye on and hasten the transit of the baskets which come unaccompanied by attendants, both on their journey to and from the exhibition.—W.

POULTRY HAUNTS.—No. 2.

MR. W. O. QUIBELL, NEWARK-ON-TRENT.

I AM ashamed to think how long a time has passed since the idea first struck me of giving a notice of some of the homes of our fanciers from whence come some of the most celebrated winners of prizes at our great poultry exhibitions, and of gleaning such information as might be interesting to those who like myself, while not going in for it extensively, are yet more or less affected by the poultry mania; but although I have been several times asked what I was about in not carrying on my project, the claims of other matters, especially of those pertaining to flowers, have prevented my doing so. I may claim, I hope, a little consideration from the readers of our Journal, to whatever portion of it they look, when I plead the labour and correspondence that have been entailed on me in the attempt to form a Horticultural Club, which is now, I am glad to say, an accomplished fact, and which will form, I hope, a rallying point for all interested in those pursuits which our Journal advocates.

Is it strange that we should gravitate towards those things in which we are especially interested, or that we should find out that we can overcome difficulties when they are to be reached? I have been and am an admirer of Houdans. I like their appearance, though some call them ugly. I like them on the table, for they are amongst the whitest and best of fowls—so different from Brahmas, concerning which I saw a letter the other day from one who had kept them, that he would as soon think of putting an owl on his table as one of them; and I have until the present year liked them for laying. I made my complaint about them, but I am inclined to think that I have fed mine too well, and that was the cause of their being so tardy in beginning. They have gone on very well since they began, although my yard was reduced by one-half owing to a violent outbreak of roup consequent on the long cold winter; and I hope that they will redeem their character with me next season, when, if I am spared, I hope to speak better things of them. Well, I had enjoyed a long morning at Belvoir, of which I shall hope to have something to say shortly, and was on my way to Manchester. But would it not be possible to stop at Newark for two or three hours and see Mr. Quibell's fowls? It was worth the trial. Mr. Ingram added to his many acts of courtesy by sending me into Grantham, and as the trap drew up at the station the train for Newark ran in. I was just in time to take my ticket, shoulder my bag and step in. When I reached Newark I started off for Mr. Quibell's, and as I came near to where I thought it was I asked a servant girl whom I met the direction in which to go. This she did not tell me, wisely, but pointing to a gig which was just detained at the railway crossing by the train—"That," she said, pointing to the gentleman in it, "is Mr. Quibell." Thanking her for the information, I accosted him, and was told that he was very sorry that he was obliged to go into the country, but that he had left orders for me to see his birds, and that his poultryman would give me any information he could. Inquiring my way, I soon found out the locale, which was none other than the old Castle of Newark, which is occupied by Mr. Quibell, who is an agricultural chemist. I was soon introduced to the poultryman, and we were quickly deep in conversation upon our favourites. The old birds were here penned-off for breeding, but the younger birds were at some little distance in the country, so that I did not see them. As nearly everywhere breeding was late this year, and I fancy that this will tell by-and-by. However, there is this to be said for the French breeds, that early chickens are not so great a desideratum as with some breeds. They grow so rapidly that they soon make up for the lateness of hatching. The largest bird I ever exhibited as a cockerel (weighing nearly 9 lbs.) was not hatched until the 23rd of April; and Mr. Quibell's man coincided with the opinion expressed to me by Mr. Wood, that early hatching was not so needful with either Houdans or Crêve-Cœurs.

As the fancy of judges varies, Mr. Quibell determines to be *utrumque paratus*; and if they prefer the lighter, which is, after all, the true type of Houdan, he has a fine male bird paired off with some light hens, while in another pen he has the darker and more generally preferred type. The bird that has for two seasons won the Crystal Palace cup was here, and although it is a bad time of the year to see birds in the brilliancy of their plumage, yet he looked uncommonly well, not "bearing his honours meekly, but as if, having already conquered, he was determined to go in and win." In comparing the strains of the three most successful exhibitors of Houdans that we have I fancy that one can see a distinction in them. Mr. Wood's birds, especially his male birds, seem to have the advantage in size. I had a monster bird of his which weighed at one time quite 9½ lbs.; but then I think this size was obtained by a sacrifice of refinement—legs too heavy, and the body too much inclined to settle down on them instead of being well up. I have seen no hens that I think equal to my friend and neighbour Mr. Dring's; and although I know he has had a very long price for one of his male birds, I cannot say that I think his strain of these as already shown equal to Mr. Quibell's. There is a refinement of limb combined with excellence of crest, beard, &c., which in my poor judgment fully justifies the high position they have attained at some of our chief exhibitions. As to the vexed question of comb, I cannot agree with those judges who wish to see them so open. It is not the characters given to them by the French writers on poultry, who ought to know their own breeds, one would think. The central boss, or whatever we may call it, like a strawberry ought to be present; but the comb itself is, according to Jacques, of various forms, and does not follow so rigid a rule as that of the Crêve-Cœur.

While Mr. Quibell's older birds are at Newark the chickens were at some distance from the town, having the benefit of a grass run which they could not have in the old Castle yard. What prize-winners there may be amongst them I know not; but of this I am sure, that I would not desire for my own stock a finer or better bird than his cup bird.

In the matter of feeding and care I find but little difference. All Houdan breeders acknowledge their hardiness and their capacity for grubbing for themselves, and, despite the disappointment I experienced this year, I shall still cling to them as all in all the kind I like best.—D., *Deal*.

SCHEDULES OF SHOWS.

BOSTON holds its sixth Exhibition of poultry, Pigeons, Rabbits, and cage birds on June 22nd and 23rd, at the same time as the horticultural show. Poultry have six £3 pieces of plate, Pigeons three value £2 each, and Rabbits one of 30*s*. How much better it would be to give the cash instead of pieces of plate of so small value. The birds are to be shown on the single-bird system. Dorkings of all colours and Cochins of all colours have to compete together, and the Committee do not deserve an entry in these classes until they break them up more. Black Hamburghs have no class. Crêves and Houdans are well taken care of. There is no variety Duck class, and Game Bantams, except Black or Brown Reds, have to go into the variety Bantam class. The poultry entry fee is 4*s*. per pen. The Pigeons are also to be shown singly. Carriers are magnificently seen after; they have six classes, a cup and eighteen prizes. Tumblers have four classes and Pouters two, one of which we are glad to see is for Whites. The entry fee is only 2*s*. 6*d*. The Boston people evidently love Pigeons better than poultry. Rabbits, too, have thirteen classes with three prizes in each class, of which thirteen classes four go the Lop eared. The entry fee is 2*s*. 6*d*.

The rules tell us "gentlemen of acknowledged ability" will award the prizes. Why are their names not announced? That is blot No. 1. Each pen of poultry—*i.e.*, each individual cock or hen, must be in a separate basket—blot No. 2. The rest of the rules are pretty much as usual, except that tickets are given to exhibitors, which is a most proper arrangement.

The Essex Agricultural Society meet this year at Brentwood. The poultry schedule is very limited. Dorkings and Cochins again have only one class each. It is very shortsighted of committees not to give at least two Dorking classes; agricultural societies should especially try to increase the cultivation of the *par excellence* table bird. Hamburghs have one class! Ducks, too, have one class! Brahmas and Game two each. The prizes are £2 and £1, and the entry fee is 5*s.* per pen. There are four £3 3*s.* silver cups, and money can be taken if preferred. This is a good rule. The old story—"Gentlemen of acknowledged ability" will be engaged, but no names are given. The prizes will be paid within fourteen days after the show. We are glad to learn this, as we do not think some of the prizes at the late Essex Show at Stratford were ever paid at all. And we observe one new and useful rule: "Special passes will be supplied to exhibitors on their written application for them." The total amount of money spent on the poultry prizes is nearly £50. We cannot help saying we think it might have been expended in a more enticing way than it has been. The entries close on June 15th. We see no mention made of baskets, and so we conclude double baskets are as much admissible as single ones.—W.

P.S.—Since writing the above, we have seen that the Judges are now advertised in these columns for Boston—viz., for poultry, Mr. Hewitt; Pigeons, Mr. Massey; and Rabbits, Messrs. Hudson and Allison. "Better late than never!" We only wish for the Society's sake they could have been duly announced on the schedulee.—W.

CROWLE SHOW OF POULTRY, &c.

This, June 1st, was an excellent Show, the attraction of so many articles of cutlery, timepieces, tea services, &c., proved so great that many of the best exhibitors put in an appearance. Turner's pens were used, and arranged on three sides of an excellent field not a great distance from the station.

Dorkings came first, and Silver-Greys were first, with Dark Greys second and third; a fair class. In *Cochins* first and special were Whites; Buffs coming second and third. In *Spanish* the winners were very good and well shown. Except the winners Light *Brahmas* were poor, the Dark variety being far ahead of them. *Game* were good, and almost every pen was noticed, the extra going to a capital Black Red. Second was a good-coloured Brown Red, but sadly out of feather; the third a Brown Red, we preferred to the second; several other good birds justly received notices. In the next class first and third were Duckwings, and second Pile. Black or Brown Red hens were the largest class, the whole being Brown Reds and the class good. In the following class first was a handsome Duckwing, second a Pile, and third a Duckwing. *Hamburghs* came next, and these were very good, the cup going to a grand pen of Gold-spangles, and almost every pen was noticed in this section. In Black or other Red Game *Bantams* all the winners were Black Reds, the cup for this section being awarded here, though the cock in the winning pen had one sickle not quite at length; the hen was a gem. Second was a grand cock, but only a moderate hen; and third a fair pen. In single cocks first was a grand Pile, which has improved much of late; the second and third were also capital Piles. Single hens, Black and Brown Reds, were first a perfect Brown Red, second and third Black Reds, all good. In Any other colour of hens first was a Pile, and second and third Duckwings. Blacks won all the prizes in the following class, these being good in all respects. *French* fowls were poor. *Polands* were not numerous, but very good; first special Golden, as also the third, and second Silvers. The Selling class was large, but some of the winners were very poor, the first-prize pen of Brahmas being especially scraggy. *Ducks* were not numerous, the Variety class being by far the best.

Pigeons were a splendid entry, the birds being shown singly. In *Carrier* cocks the first and second were Blacks, grand in all points; a well-known winner having to be content with third. Hens were equally good, and the winners also Black. In *Pouter* cocks the first and second were Blues, and third White; nearly every bird was noticed. In hens the winners were all Blues, and a capital lot. Almond *Tumblers* were very good. In the next class first was a neat Short-faced Black Mottle; second a Long-faced Black Bald; and third a Short-faced Red Mottle. *Barbs* were a good class, a Dun being placed first. This bird looking well in the earlier part of the day, but was watery in the eyes towards night. Capital Blacks were second and third. In foreign *Owls* first and second were Blue, and third White, three good birds. The first-prize *Turbit* was a little large, but otherwise good, a Black; second was a Red, very good and small; and third a Silver, good but somewhat large, the whole being clear on the thighs, many otherwise good birds being defective in that respect. *Jacobins* were a good class, the first and third Reds, and second Yellow. Some of the birds were cut a little lower on the throat than we like to see. *Trumpeters* were all of the foreign variety; and *Fantails* a moderate lot of birds, the winners standing quite out. The winners in *Nuns* were Blacks, and there were also some good Reds in the class. *Magpies* were a very good class, the winners Red, Yellow, and Black respectively. The *Swallows* and *Archangels* being also good. In *Dragoons* Blues won, the first-prize bird being in our opinion perfection in both head properties and colour. In *Antwerps* there were two classes, the first in Long-faces going to a Blue Chequer; second to a Red Chequer, as also the third. Short-faces were a good class, the winners being Silver Duns. There was very little choice in our opinion between the first-prize Powder Blue and second Silver in English Owls; the third going to a Blue. In the Variety class a most beautiful Crescent-breasted Swiss first; a Black Turbiteen second; and a Blondinette third. A capital pair of Almonds were placed first in the Selling class, and many other pens were noticed.

Cage Birds were but a small show; but there were some good birds.

There were four classes for Rabbits, and the prizes being good we were surprised to find the entries poor, there being only thirty-six entries, although some were very good, especially Mr. Irvine's Lop and Mr. Hudson's Silver-Grey. From some cause or other the judging did not commence till near twelve o'clock, and the consequence was that they were scarcely finished at four in the afternoon, and some were removed within half an hour of the arbitration being complete.

Dorkings.—1, W. H. King, Sandfield, Rochdale. 2 and *c*, W. Morfitt, Goole. 3, W. Harvey, Sheffield. *hc*, J. Chester, Thorne.

Cochins.—2, J. Boyle, Manchester. 3, W. Harvey.

Spanish.—1 and *hc*, R. Newbitt, Epworth. 2, H. Beldon, Goitstock. 3, J. Powell, Bradford.

Brahmas.—*Light.*—2, H. Beldon. 3, W. Whiteley, Sheffield. *hc*, R. E. Horsfall, Liverpool. *Dark*—1, W. Whiteley. 2, J. F. Smith, Cherry Mount, Sheffield. *hc*, Rev. A. G. Brooke, Shrawardine, Shrewsbury; J. F. Smith. *c*, W. T. Millet, Liverpool.

Game.—*Black-breasted and other Reds.—Cock.*—1, S Matthewa, Stowmarket 2, A. Sugden, Cleckheaton, Normanton. 3, H. E. Martin, Sculthorpe, Fakenham. *vhc*, W. Perrin, Nantwich, Cheshire. *hc*, J. Mason, St. John's, Worcester; J. Chester, Nantwich, Cheshire; J. Cock; J. R. Fletcher, Stoneclough. *c*, W. Anderson, Epworth; J. Taylor, Sculthorpe. *Hen.*—1, J. Chesters. 2, H. E. Martin. 3, W. G. Waters, Elsham. *vhc*, J. R. Fletcher. *hc*, C. Foster, Crowle; S. Matthew; H. Beldon; S. Harrison, Epworth; A. Cameron, Epworth. *c*, J. Cock.

Game.—*Any other variety.—Cock.*—1, J. A. & H. H. Staveley, Driffield. 2, W. G. Waters. 3, H. E. Martin. *hc*, J. R. Fletcher. *c*, S. Matthews. *Hen.*—1, H. E. Martin. 2, E. Winwood, Worcester. 3, G. Yates, Thorne. *hc*, H. Beldon; H. Winter. *c*, S. Matthews.

Hamburghs.—*Golden-spangled.*—Cop and 3, H. Beldon. 2, H. Pickles, Earby, Leeds. *hc*, T. P. Carver, Laughorne, Boroughbridge. *c*, G. Holmes, Great Driffield; J. Robinson, Garstang. *Silver-spangled.*—1 and 3, H. Beldon. 2, J. Robinson. *vhc*, H. Pickles. *hc*, G. Holmes; J. Robinson.

Hamburghs.—*Golden-pencilled.*—1, T. P. Carver. 2 and 3, H. Beldon. *vhc*, H. Pickles. *hc*, J. Robinson. *Silver pencilled.*—1 and 3, H. Beldon. 2 and *vhc*, J. Robinson. *hc*, H. Pickles.

Game Bantams.—*Black-breasted and other Reds.—Cock.*—Cup, Mrs. E. Newbitt, Epworth. 2, A. Sugden. 3, A. Smith, Northowram, Halifax. *vhc*, W. Shenton, Lancaster. *hc*, R. R. Plumtree, Epworth; A. C. Bradbury, Nuthall, Nottingham; J. R. Fletcher. *c*, T. S. Stevenson, New Bridge, Beverley. *Hen.*—1, Mrs. E. Newbitt. 2, J. Clifton, Lindholme, Hatfield. 3, W. A. Wressell, Crowle. *hc*, R. R. Plumtree; A. Sugden; J. R. Fletcher.

Game Bantams.—*Any other variety.—Cock.*—2, Mrs. E. Newbitt. 3, T. Dawson & Son, Epworth. *vhc*, R. J. Hartley, Altrincham. *hc*, A. Smith, Northowram; A. C. Bradbury. *Hen.*—1 and *vhc*, T. Dawson & Son. 2, J. R. Fletcher. 3, W. F. Entwisle, Westfield Wyke, Bradford. *hc*, Mrs. E. Newbitt; T. Dawson & Son.

Bantams.—*Any variety except Game.*—1, H. Beldon. 2, J. Mayo, Gloucester. 3, T. Cropper, Bacup. *hc*, W. G. Waters; J. Earnshaw, Rotherham; A. C. Bradbury; J. Clarkson, Birmingham.

French.—*Any variety*—1, W. Cutlack, jun., Littleport, Isle of Ely (Crève-Cœurs). *hc*, J. Wicks, Appleby, Brigg; H. Grant, Bradford (Houdans and Creve-Cœurs).

Farmyard Cross.—1, C. Antey, Ealand Warpings. 2, G. Smith, Crowle. 3, G. Robinson, North Fordingham. *hc*, J. B. Hepworth, Hatfield; T. Wroot, Eastoft; J. Smith, Crooks Moor; T. J. Sayles, Warpings.

Any other Variety.—Cup and 2, H. Beldon. 3, A. & W. H. Silvester, Sheffield.

Selling Class.—1, Wells & Bray, Winterton. 2, R. Medley, Sheffield. 3, W. Perrin, Nantwich. *hc*, J. Clifton; Mrs. Peet, Sharnbrook; H. Beldon; J. B. Hepworth; A. & W. H. Silvester; Simpson & Dodds, Bedale; J. M. Atkinson.

Ducks.—*Muscovy.*—1, J. J. Brown, Althorpe. 2, S. C. Brunyee, Crowle. 3, Miss Spilman. *Any other variety.*—1,—Snell, Barrowden, Stamford. 2, A. and W. H. Silvester. 3, A. C. Bradbury. *hc*, W. Bygott; A. C. Bradbury.

PIGEONS.

Carriers.—*Cock.*—Cup, J. Denkio, Sheffield. 1 and 2, R. Fulton, Brockley, London. 3, E. Horner, Harewood, Leeds. *hc* and *c*, H. Yardley, Birmingham. *Hen.*—1 and 3, R. Fulton. 2, H. Yardley. *hc*, J. E. Crofts, Blyth, Worksop. *c*, H. Yardley; E. Horner.

Pouters.—*Cock.*—1 and 3, R. Fulton. 2, W. Harvey, Sheffield. *hc*, J. Hairsine, Hull; W. Nottage, Northampton; J. E. Crofts. *c*, W. Harvey; H. Yardley; E. Horner.

Pouters.—1, E. Horner. 2 and 3, R. Fulton. *hc*, W. Harvey; H. Yardley. *c*, W. Harvey; W. Nottage; J. E. Crofts.

Tumblers.—*Almond.—Cock or Hen.*—Cup, H. Yardley. 2 and 3, R. Fulton. *hc*, H. Yardley; A. & W. H. Silvester; J. Gardiner, Preston; E. Horner. *Any other variety.—Cock or Hen.*—1, R. Fulton. 2, W. Tedd, Erdington. 3, A. and W. H. Silvester. *hc*, R. Fulton; H. Yardley; A. & W. H. Silvester. *c*, W. Tedd; H. Yardley; E. Horner.

Barbs.—*Cock or Hen.*—1, R. Fulton. 2, H. Yardley. 3, E. Horner. *hc*, R. Fulton; W. Harvey; R. White; E. Horner. *c*, W. Harvey; H. Yardley; E. Horner.

Owls.—*Foreign.—Cock or Hen.*—1, L. Horner, Crayford. 2, R. Fulton. 3, H. Yardley. *hc*, E. Horner. *c*, G. Richardson, Guilder, Rochdale.

Turbits.—*Cock or Hen.*—Cup, R. Fulton. 2, Miss F. Seamor, Leeds. 3, H. Yardley. *hc*, W. Tedd; G. H. Pickering, Driffield; W. Harvey; A. & W. H. Silvester; T. S. Stephenson.

Jacobins.—*Cock or Hen.*—1, J. Blanchard. 2, R. Fulton. 3, T. Holt, Bradford. *hc*, R. Fulton; J. Blanchard; J. Earnshaw; T. Holt; E. Horner. *c*, W. Harvey.

Trumpeters.—*Cock or Hen.*—1, W. Harvey. 2 and 3, R. Fulton. *hc*, W. Harvey; E. Horner. *c*, W. Harvey; A. A. Vander Meersch, Tooting.

Fantails.—*Cock or Hen.*—1 and *c*, J. F. Loversidge, Newark. 2, E. Horner. *hc*, A. Smith, Northowram; H. Yardley.

Nuns.—*Cock or Hen*—1 and 3, E. Horner. 2, W. Tedd. *hc*, Rev. A. G. Brooke; W. Harvey; J. Earnshaw; A. A. Vander Meersch; E. Horner. *c*, T. Green; Rev. A. G. Brooke; H. Yardley.

MAGPIES.—*Cock or Hen.*—1, J. E. Crofts. 2, Miss F. Seanor. S, G. Richardson. *hc*, W. Tedd; R. Fulton; H. W. Webb, Lower Sydenham; W. Harvey; H Yardley; J. Blanchard; E. Horner.

SWALLOWS.—*Cock or Hen*—Cup and 3, E. Horner. 2, W. Tedd. *hc*, Miss F. Seanor. *c*, W. Tedd; R Fulton; A. A. Vander Meersch.

ARCHANGELS.—*Cock or Hen*—1, H. W. Webb. 2, A. A. Vander Meerach. S, E. Horner. *hc*, W. Allen, Mexborough; E Horner.

DRAGOONS.—*Cock or Hen*—1, Cup and S, R. Woods. 2, H. Jenning, Alberton, Bradford. *hc*, R. Woods; R. Fulton; Wells & Sherwin; H. Jennings. *c*, H. Yardley.

ANTWERPS.—*Long-faced.—Cock or Hen.*—1 and 3, J Robertshaw, Thornton, Bradford 2, H. Jennings. *hc*, R. White, Manchester; W. Ellis, Idle, Leeds; J. Lister, Keighley. *c*, E Horner, Harewood, Leeds.

ANTWERPS.—*Short-faced.—Cock or Hen.*—1, W. F. Entwisle. 2, H. Yardley. 3, J. Lister. *hc*, J. Deaking, Sheffield; J. Hairsine; J. Earnshaw, Rotherham; J. Gardiner, Prestoe; W. Ellis; E. Horner; H. Jennings. *c*, R. White.

OWLS.—*English.—Cock or Hen.*—1 G Richardson, Oulder. 2, Miss F. Seanor. 3, H Jennings. *hc*, R. Fulton; H Yardley; R. White.

ANY OTHER VARIETY.—*Cock or Hen.*—1, Miss F. Seanor. 2, R. Fulton. S, H. Yardley. *hc*, W. Harvey; A. & W. H. Silvester (2); J. E. Crofts. *c*, W. Harvey; H. Yardley

SELLING CLASS.—*Pair*—1, A. & W. H. Silvester. 2, R. Fulton. 3, J. Lister. *hc*, C. Wroot, Hull (Black and White Barbs); H. Yardley; R. White; E. Horner (2). *c*, H. Yardley; H. Jennings.

CAGE BIRDS.

CANARY.—*Belgian.*—1, E. A. Chapman, Crowle. 2, M. Ballans, Dewsbury. *Norwich.*—1, E. A. Chapman. 2 and 4, H. N. Fosbrooke, Leeds. 3, T. Green, Gainsborough.

MULE, CROSSED BY GOLDFINCH OR LINNET.—1, M. Ballana. 2, G. Drinkall, Crowle.

GOLDFINCH, COMMONLY CALLED REDCAP.—1, M. Horn, Armley. 2, G. Yates, Thorne. S, T. Procter, jun., Crowle, Slack.

LINNETS.—*Grey.*—1, T. Kirk, Burnham. 2, J. J. Temperton, Burnham, Bawtry. 3, T. Green.

ANY OTHER VARIETY OF ENGLISH BIRD.—1, H. N. Fosbrooke, Leeds. 2, E. A. Chapman (Lark). S, A. Brambill.

RABBITS.

LOP-EARED.—*Buck or Doe.*—1 and *hc*, J. Irving, Blackburn. 2, A. Hudson, Hull. 3, T. Schofield, Cheetham, Manchester. *c*, T. Green.

HIMALAYAN.—*Buck or Doe*—1, B. Greaves. 2 and *hc*, J. M. Atkinson, Alford. 3, C. G Millett, Fairfield, Liverpool. *c*, W. Russell.

SILVER-GREY.—*Buck or Doe.*—Cup and 1, H Hudson, Hull. 2, T. Schofield. 3, A. Canty, Barton-on-Humber. *c*, E. Stubbs, Pinchbeck, Spalding.

ANY OTHER VARIETY.—*Buck or Doe*—1, B. Greaves (Dutch). 2, J. E. Pilgrim, Hinckley (Belgian Hare). 3, T. Schofield (Siberian). *hc*, W. Russell, Hull (Angora). *c*, H. Swetnam, Fulford, York (Angora).

CATS.—*English.*—1, E Baxter, London. 2, T. Clayton. 3, Miss Skelton, Burnham; J. Young, Hull. *hc*, J. Furnis, jun., Crowle; E. Horner.

JUDGES.—*Poultry:* Mr. J. Dixon, North Park, Clayton, Bradford; Mr. F. Sales, Crowle. *Pigeons:* Mr. W. Cannon, Bradford. *Cage Birds:* Mr. Glassby. *Rabbits and Cats:* Mr. W. G. Waters, Eleham.

DARI FOR POULTRY.

IN answer to Mr. Brown's query respecting the above I will state my experience, having used it since the beginning of the year.

It is the greatest egg-producer I have ever used. I have given it to Brahmas and Hamburghs, and so far have only had one of the Brahmas broody. On leaving it off for a few days, for a change, the eggs fell off too, but on resuming it the eggs increased on the second day. I have had 253 eggs from five Black Hamburghs from February 6th to May 31st. The only fault I have to find with it is that it keeps the birds in bad condition: they would never lay on flesh with it alone. Both adults and chickens eat it readily. I trust some other fancier will give his experience with it.—GEO. RILEY.

DO YOU FEED YOUR BEES?

I AM often asked this question. I reply, Yes, sometimes. Some time since I wrote to you on the subject, but I do not remember from that time until now I have met with one who did not approve of feeding. However, I am not convinced that it is a good thing to be always stuffing bees, as some advise. If I continue to feed my bees so that they have the hive full of syrup, are they not restricted in the space for breeding?

I have several swarms this spring from hives that had no feeding all the winter. One poor neglected stock, taken in haste one day last year, was placed on an old iron stool covered with a bit of old sack, and a piece of sheet lead to hold it on; it is a very small straw hive. From this hive I have had three swarms this month—two of them good and one very small. They are all doing well, and the old stock seems as strong as ever.

I examined the first swarm last week and found honey; in fact it seems that they had filled the comb with honey as fast as they constructed the comb. Now, had I fed them what is to hinder them from filling all the comb, having no space left for young bees?

What has made me think it not good to feed as a rule is, that the bees are taught to look for the bottle instead of going abroad for honey.

Mr. Pettigrew argues that sugar at 3*d.* per lb. makes it profitable to feed, as if one pound of sugar would be converted into as much honey. This admission that sugar may be profitably converted into honey is a fine tale for honey-buyers; besides, it cuts the ground from under those who go honestly to work to produce honey for exhibition. A friend of mine told me to feed at all times when honey is scarce. On this principle it is no longer honey, but honey and sugar. If it is not so, will someone explain it?—J. C., *Brentford.*

[There is in this letter not only an honest ring and healthy tone, but a thick stratum of common sense. I am obliged to him for it, inasmuch as it gives me an opportunity of stating more fully what was meant by my remarks on feeding in the letter under the heading of "A Swarm of Bees in May."

In my remarks nothing was said about syrup being converted into honey. Bees cannot do this; and the attempts to make bees convert syrup into marketable honey have been loudly condemned by me in more places and occasions than one. Many of the readers of this Journal remember my letter on "Spurious Honey and Fraudulent Dealers" which appeared in its columns six years ago. Let me repeat that syrup made of sugar and water cannot be converted into honey, and anybody knowing this cannot honestly sell the one for the other. From a private letter from Ireland, as well as from the letter of "J. C.," I find that my remarks have been misunderstood. No one approves of "always stuffing bees," or "restricting the space for breeding," or of "teaching them to look for the bottle instead of going abroad for honey." I have never done this or taught other people to do it, and think it would have been better if "J. C." would quote my words instead of unwittingly misrepresenting my meaning. I am glad to learn that "J. C.'s" bees have done so well without feeding, and hope that he will have a good harvest of honey, and favour the readers of this Journal with a report of the same.

Now for a word of explanation. I said 4*s.* or 5*s.* worth of sugar given to a swarm makes it into a stock hive worth 30*s.* This, of course, was meant to be done in autumn, which has been explained again and again. We never make, nor can we make, honey hives from sugar; but in honey seasons swarms from honey hives may be put into empty hives and made into excellent stocks by feeding. Hundreds of stock hives were thus made last year, and now, like "J. C.'s" unfed hives, are doing well. This practice will become more general year by year. In seasons unfavourable for honey-gathering, stocks can be fed and kept in a state of health and prosperity at little expense by reason of the low price of sugar. As to swarms in May and June, I have no hesitation in saying that if the weather be unfavourable for honey-gathering at the time of swarming it is both wise and profitable to feed them.

Syrup wisely given to young swarms does not restrict breeding space, but creates it. Swarms on being hived have a passion for comb-building, and hence they convert almost all the sweets they can receive and gather into combs for breeding in. The anxiety of swarms to build combs and their industry at this work are not to be wondered at when we remember every first swarm has about two thousand eggs to set or waste every day. A few pounds of sugar given to young swarms help them very much. If "J. C." had given his third swarm, which he says was small, a few pounds of syrup on being hived he would have done something to bring it abreast of his second swarm which was so much larger. Here let me say that feeding second and third swarms on being hived is not so important as feeding first swarms, for in the second and third swarms the queens are not pregnant, and will not commence to lay for some days or till some combs have been built.

Slow and continuous feeding of stock hives during unfavourable weather in March, April, and May keeps them healthy and prosperous. Feeding swarms in May and June enables the bees to give their queens breeding spaces; and rapid autumn-feeding enables light and poverty-stricken hives to store up food for the winter months, and swarms to fill their hives with combs and store up food enough for their support.—A. PETTIGREW.]

BEES TRANSFERRING EGGS.

Mr. PETTIGREW has mentioned a case of egg-carrying on the part of bees, which, allowing for the absolute correctness of the facts (and there seems no reason to call it in question) is an important testimony to a long-doubted and long-denied statement. Every tyro knows that queen bees "lay far more eggs than they set." I have myself seen a queen lay eggs at random on the outsides of a cell after she had filled every available comb, laying two, or even three eggs in the same cell. In this case the bees around her simply devoured those eggs as fast as she dropped them. There was no carrying them off, nor in fact would it have been of any use to do so, as every comb was full. There have been times, too, in my long experience when it would have been very convenient had the bees transported worker-bee eggs to other and more suitable combs; but I have never to my recollection had even a suspicion of the fact.

Mere assertion of course is valueless. To go on "telling bee-keepers that working bees assist the queens in the distribution and setting of eggs" goes for nothing apart from the well-balanced and clearly-ascertained facts on ocular demonstration, which are the basis of all science. Had Mr. Pettigrew given us facts such as those now stated, neither Mr. Woodbury nor Mr.

Lowe, nor anybody else, would have repeated the assertions of all scientific bee-keepers to the contrary, without some hesitation at least, even if they were not actually convinced. I know that Mr. Woodbury up to quite the close of his life was still sceptical on the subject.—B. & W.

NEW BOOK.

A Book for Bee-keepers. By ALFRED RUSBRIDGE.

IN his introductory remarks Mr. Rusbridge tells us that "at the special request of a wide circle of apiarian acquaintances" he has "endeavoured to give in as concise and simple a manner as possible a few hints relative to the ways and means necessary to keep bees successfully, to get the maximum of pure honey-comb at a minimum of care and attention." We think Mr. Rusbridge has fairly succeeded in his object, and doubt not that all who carry out his suggestions will be rewarded accordingly.

On the principle that "it is a good divine that follows his own instructions," our author takes his pupil to his apiary at once, describes the history and prospects of hive after hive, with an account of the profits actually obtained. There is nothing very new in the bill of fare set before us, but it is good wholesome diet, which cannot fail to agree with all youthful apiarians gifted with perseverance and a sound judgment. "A net profit averaging from 100 to 300 per cent. annually on the capital invested in keeping bees," is temptation enough to set everybody bee-keeping. Good luck, we say, to all who embark in this *El-dorado* enterprise.

OUR LETTER BOX.

DARK BRAHMAS (*R. S.*).—They are very good layers. If you refer to our number published last October 29th, you will see full particulars and woodcuts.

CONFINED SPACE FOR FOWLS (*T. W. B. W.*).—There would only be room for the number of fowls you propose to keep to stand in the space you offer for them. You cannot keep in a house 9 feet by 6 feet more than seven—a cock and six hens, if you desire to keep them healthy. You have no room for a hutch. If, however, you mean to describe the house only, and the fowls are allowed free run, we say you may keep forty in perfect health if they are kept clean, but even then we do not advise you to keep Rabbits in the same place. You may lay it down as a rule, that if the health and well-doing of fowls are concerned they must have a place to themselves, the only exception being where the roof affords the convenience for a loft, which may be devoted to Pigeons, but it must then be ceiled and stopped so that no dirt shall fall through. You would improve your house if you increased the ventilation by having a thorough draught by means of opposite windows that could always be open in warm weather.

BRAHMA'S FEET SWOLLEN (*F. W.*).—You should have told us the age of the cock. If he is an old bird we do not advise any treatment. If he is young the best thing you can do is to confine him where he can walk on soft grass or a litter of hay. The dark blue comb is a serious symptom. It arises probably from disorders consequent on enforced inability to take exercise of any kind. The corns should be soaked in warm water and may then be partially picked off. The hole must be cleaned out, even if it is necessary to enlarge it. It cannot heal while there is a gravel stone in it. The bird must have a table-spoonful of castor oil, and it must be ascertained that it has operated effectually. The effect of this will be to remove the purple colour of the comb. His diet must then be entirely of soft food, ground oats, or slack barley-meal, occasionally some bread and ale. The feet should be poulticed, and each foot wrapped in wash leather. The poultices should be changed daily as long as they seem necessary, and the bird should be compelled to take some exercise by being driven to get on his feet.

CROYDON POULTRY SHOW.—Mr. A. H. Etches was awarded the second prize in the class for Dark Brahma cocks. Mr. R. Wilkinson informs us that his Archangel Pigeons were "highly commended," and not Mr. Cresswell's.

DRIVING BEES (*H. G. M.*).—Drumming is the usual mode of driving bees from full hives, and from empty hives they are generally driven out by one blow or thump on the crown of the hive. You did in the end what should have been done at first, and you succeeded. In the first attempt you drove the bees from the crown of the hive to its side, and there they remained, being unwilling to go further. The bottom hive being "dressed" with syrup was no attraction to the swarm, but the dressing may have hindered the bees from running. Your bees fancied they had run far enough, and their determination to remain where they were has taught you the best and speediest mode of removing bees from one empty hive to another.

SWARM—FIRST OR SECOND? (*B. L. B.*).—We think the swarm you have is the second one from your stock of bees. First swarms weigh from 4 lbs. to 7 lbs. each, seconds from 2 lbs. to 4 lbs. each. The disappearance of the clusters at the door of your hive and the diminished traffic which you noticed were indications that the first swarm had gone. Neither of your hives will be full enough for supering for some weeks. As soon as a hive begins to be overcrowded a single super should be put on it. If your hive had been properly protected from the rays of the sun the combs would not have melted and fallen down.

CRESTED NORWICH CANARY.—Mr. Geo. J. Barnesby is not correct in his description of fig. 92 when he says Messrs. G. & J. Mackley's Crested bird was the bird which took first prize last year at the Crystal Palace Show, first and medal at Darlington. It was a hen, clear with dark crest, that the Messrs. Mackley bought at the Norwich Show, and only awarded fourth there, which afterward took first and medal at Darlington, not the cock. Nor did it take first or second at Yarmouth or Lowestoft as stated.—W. B. HOVELL, *Norwich*.

YOUNG THRUSHES CRAMPED (*H. D. C.*).—It is not an uncommon occurrence for Thrushes or Blackbirds either to be afflicted with cramp in their claws when brought up in cages where water vessels are continually kept inside. Young birds especially are more liable than those of mature age. The continual paddling about in the damp paralyses their feet and brings on a kind of rheumatism. If you have used a water vessel inside the cage, remove it to the outside so that the birds may have access to it. If the powerless state of their legs prevents them reaching the water vessel, supply the birds for a time (until they gain strength in their legs) with the food somewhat moist. Give the birds barley-meal moistened with milk alternately with soaked bread, worms and scraped beef occasionally. Each day for a week at least hold or immerse the bird's claws and legs in warm salt and water (not too warm) for three or four minutes each time, and after taking them out gently rub their shanks and claws with brandy in which a pinch of cayenne pepper has been put. Lower the perches in the cage to within 2 inches of the floor of the cage, over which should be strewed soft hay or dry moss. Keep the birds dry and warm whilst so powerless in their feet. Thrushes are very fond of bathing, and a bath is very essential, but it should be supplied so that the cage bottom should not remain damp for some considerable time afterwards. One plan is to attach a small cage—a kind of ante-chamber—containing the bath, hooked on before the opening or doorway, and when the bird or birds have bathed remove it.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

DATE. 1875. June.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	IN THE DAY. Shade Temperature. Max.	IN THE DAY. Shade Temperature. Min.	IN THE DAY. Radiation Temperature. In sun.	IN THE DAY. Radiation Temperature. On grass	Rain.
	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 2	30 192	67 5	59.2	N.	57.7	77.8	48 0	125.0	46.0	—
Th. 3	29.955	71.2	62 8	N.	59 0	82 6	52 2	125.4	51 1	—
Fri. 4	29.896	61.0	58 0	S.W.	60.8	81.3	54.8	127.6	53.1	—
Sat. 5	30 012	68.0	58 0	N.W.	62.0	76.1	51.7	126 8	50.7	0,010
Sun. 6	29 910	61.0	58.1	S.W.	61 1	75.1	55 2	127.9	53 7	—
Mo. 7	30 188	64 8	59.6	S.W.	61 8	75.0	55 0	111.8	51.7	0 010
Tu. 8	30 192	65 7	59 9	W.N.W.	61.0	77.1	54.8	125 1	51 3	—
Means	30.033	65.7	59.4		60.5	77.9	53.1	124.2	51.1	0,020

REMARKS.

2nd.—Rather cloudy early, but soon clearing off gave us a most beautiful day and night.

3rd.—Another very fine day, but rather too warm and close to be pleasant; thunder at a distance all the afternoon.

4th.—Fine early and much cooler; fair all day, but rather stormlike in the afternoon, and cloudy at night.

5th.—A very fine day, and very pleasant from there being a cool breeze all day.

6th.—Very slight rain early, but soon cleared, and was fair all day, though a little cloudy between 8 and 9 P.M., and windy at midnight.

7th.—Not a pleasant day, being cloudy and very windy; stormlike in the afternoon and evening.

8th.—Bright and fine all day, and at times very warm.

A fine warm week.—G. J. SYMONS.

COVENT GARDEN MARKET.—JUNE 9.

A LARGE supply of outdoor produce has arrived in the market during the week, and the supply from under glass has also much improved both in quality and quantity, the only scarcity at all felt being in first-class Peaches. Considerable stocks of new Potatoes are now on hand from the Channel Islands, Malta, and Lisbon, at rates ranging from 12s. to 18s. per cwt.; and good old Potatoes can easily be obtained.

FRUIT.

		s.	d.		s.	d.			s.	d.		s.	d.
Apples	½ sieve	2	6	to	3	6	Mulberries	lb.	0	0	to	0	0
Apricots	box	2	6		4	0	Nectarines	dozen	15	0		30	0
Cherries	do.	2	0		4	0	Oranges	℔ 100	5	0		14	0
Chestnuts	bushel	0	0		0	0	Peaches	dozen	15	0		31	0
Currants	½ sieve	0	0		0	0	Pears, kitchen	dozen	0	0		0	0
Black	do.	0	0		0	0	dessert	dozen	0	0		0	0
Figs	dozen	8	0		12	0	Pine Apples	lb.	4	0		8	0
Filberts	lb.	0	0		0	0	Plums	½ sieve	0	0		0	0
Cobs	lb.	0	0		2	0	Quinces	dozen	0	0		0	0
Gooseberries	quart	0	4		0	6	Raspberries	lb.	0	0		0	0
Grapes, hothouse	lb.	3	6		10	0	Strawberries	lb.	1	0		6	0
Lemons	℔ 100	8	0		12	0	Walnuts	bushel	8	0		12	0
Melons	each	3	6		10	0	ditto	℔ 100	1	0		1	6

VEGETABLES.

		s.	d.		s.	d.			s.	d.		s.	d.
Artichokes	dozen	3	0	to	6	0	Leeks	bunch	0	4	to	0	0
Asparagus	℔ 100	3	0		6	0	Lettuce	dozen	1	0		2	0
French	bundle	0	0		0	0	Mushrooms	pottle	0	9		2	0
Beans, Kidney	℔ 100	2	0		0	0	Mustard & Cress	punnet	0	2		0	0
Broad	bushel	0	0		0	0	Onions	bushel	4	0		8	0
Beet, Red	dozen	2	0		4	0	pickling	quart	0	6		0	0
Broccoli	bundle	0	9		1	6	Parsley	doz. bunches	4	0		6	0
Brussels Sprouts	½ sieve	0	0		0	0	Parsnips	dozen	0	9		1	0
Cabbage	dozen	2	0		0	0	Peas	quart	1	0		2	0
Carrots	bunch	0	6		0	8	Potatoes	bushel	2	6		5	0
Capsicums	℔ 100	0	0		0	0	Kidney	do.	3	0		5	0
Cauliflower	dozen	4	0		8	0	Radishes	doz. bunches	1	0		1	6
Celery	bundle	1	6		2	0	Rhubarb	bundle	0	4		0	9
Coleworts	doz. bunches	2	0		4	0	Salsafy	bundle	1	6		0	0
Cucumbers	each	0	6		1	0	Scorzonera	bundle	1	0		0	0
pickling	dozen	0	0		0	0	Seakale	basket	0	0		0	0
Endive	dozen	2	0		0	0	Shallots	lb.	0	8		0	4
Fennel	bunch	0	3		0	0	Spinach	bushel	3	0		0	0
Garlic	lb.	0	6		0	0	Tomatoes	dozen	2	0		4	0
Herbs	bunch	0	3		0	0	Turnips	bunch	0	6		1	0
Horseradish	bundle	0	0		4	0	Vegetable Marrows	doz.	0	0		0	0

WEEKLY CALENDAR.

Day of Month	Day of Week.	JUNE 17—23, 1875.	Average Temperature near London.			Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
17	Th	Royal Society at 8.30 P.M. Grand Floral Fête at York.	72 9	47.3	60.1	43 af 3	17 af 8	42 af 7	2 2	14	0 32	168
18	F	Exeter Rose Show.	72 3	50.4	61.3	44 3	17 8	43 8	32 2	●	0 45	169
19	S		70.8	48.6	59.7	44 3	17 8	40 9	13 3	16	0 58	170
20	Sun	4 Sunday after Trinity.	72 3	50.5	62.4	44 3	18 8	20 10	10 4	17	1 11	171
21	M	Longest Day.	74.4	48 8	61.2	44 3	18 8	49 10	18 5	18	1 24	172
22	Tu		73.6	47.1	59.9	45 3	18 8	10 11	35 6	19	1 37	173
23	W	Geological Society at 8 P.M.	72.7	48.9	61.5	45 3	19 8	21 11	55 7	20	1 50	174

From observations taken near London during forty-three years, the average day temperature of the week is 72.7°; and its night temperatu e 48 8°.

CHOICE SPRING FLOWERS.

SPRING flowers have been treated upon in the Journal so often and so well that the subject might not unreasonably be considered exhausted. There is, however, an important class of plants which by some strange inadvertence have hitherto remained comparatively unnoticed — I mean dwarf flowering shrubs, which for their low compact growth and great intrinsic beauty certainly merit the best attention and care, and a much more prominent position than has yet been given them.

Take, for example, the Sun Rose (Helianthemum), what can be more beautiful? and yet how seldom is it met with? It comes readily from seed, and the seedlings of both sections soon grow to a considerable size—those of stiff erect habit forming compact bushes about 3 feet high and as much through, bearing a profusion of flowers in May and June of various shades of pink, purple, yellow, and white; and the more dwarf section forming dense spreading cushions of about a foot high, also flowering in May and June, the colours ranging through a variety of shades, such as pale primrose, bright yellow, rich orange, deep rose, crimson, pink, and white. They are as suitable for vases, beds, and borders as for rockwork, upon which they are usually found.

Andromeda floribunda is another valuable shrub of dwarf spreading habit, better known, perhaps, than the Helianthemums, but which, like them, is not cultivated so extensively as it ought to be. It is true that a solitary plant of it may occasionally be seen in the fringe of Rhododendron beds, or a few pot plants in early forcing houses; but the fine effect of large masses of the pretty Heath-like blossom, which it puts forth in April, does not yet appear to be understood. A. Catesbœi, which comes into flower about a month later than floribunda, is of a somewhat more straggling habit of growth; it is a distinct and beautiful species. The foliage and bark of the young growth are of a deep red colour. The full beauty of the panicles of white flowers often remains unnoticed, especially upon young plants, as the flowers cluster so thickly and heavily upon the tips of the flexile shoots as to bend them down almost to the ground.

The Pernettyas put forth their flowers almost simultaneously with the Andromedas; the narrow-leaved kind, P. angustifolia, is an interesting and ornamental plant, growing about 2 feet high, bearing a profusion of spikes of minute white flower bells; in May and June and afterwards having pretty clusters of crimson berries, which remain in charming contrast to the evergreen foliage for several months; thus taking as high a rank among berry-bearing plants in autumn and winter as it does among flowering shrubs in spring. P. mucronata is a much bolder variety, having comparatively large foliage, and reaching a height of 5 or 6 feet. It is a handsome shrub.

Spiræa Thunbergii is one of the brightest gems of April and the early part of May; it is a dwarf variety, the slight flexile growth, clothed with soft feathery foliage and springing directly upwards from the crown, does not attain a greater height than 2 feet. It has a graceful appearance, and when in flower it is so crowded with pretty white blossom that the shoots bend over each other in the most charming manner, and are then literally such wreaths as we covet for our bright May garlands. There are other early-flowering species of this lovely and extensive genera, such as the pink kinds Nobleana and lævigata, and the white ariæfolia; but none of them to my mind are at all to be compared either for beauty or utility with my favourite Thunbergii.

Daphne cneorum, sweetest of all the Daphnes, is an old and general favourite of such great excellence that it must not be omitted here. Growing luxuriantly in exposed situations it yields a profusion of its deep pink richly-scented flowers in April, and it also forms a charming feature in the early-forcing house in pots, bearing forcing well, but with the flowers of a paler hue than when seen in the open air.

Azalea amœna, the rosy-purple Chinese Azalea, is very beautiful when laden with its cheerful flowers in May. It is a distinct and most interesting species—just one of those gems that are worthy of a place in every garden.

Kalmia glauca is another interesting little shrub, forming compact bushes of about 2 feet high that are bright from April to June with pretty flowers of a deep purplish-red hue. Its minute growth and abundant blossom render it a very suitable plant to occupy many an odd nook and corner in rockeries and shrubbery borders, as well as to form a fringe to kindred plants of more lofty growth.

Mixed beds of shrubs of the kinds I have selected and some others have proved so interesting and ornamental as to induce me to append a note descriptive of the most effective method of arrangement. Taking a circular bed of, say, 20 feet in diameter, I would devote the centre chiefly to Rhododendrons, leaving a border 4 feet wide for the mixed shrubs. Among the Rhododendrons there should be some Tritomas, Liliums, Gladioli, and the yellow Œnothera gigantea to brighten the centre with their gay flowers after the shrub flowers have faded. In the border the dwarf kinds of Sun Rose would find a place near the edge with Daphne cneorum; the taller varieties standing back among such plants as Berberis dulcis and B. stenophylla, the Kalmias glauca, angustifolia, and nana, Erica mediterranea, the Pernettyas, Spiræas, Skimmias, Erica carnea, and Gaultherias, all being blended together and placed according to their respective heights, interspersed with a few select kinds of Iris, Solomon's Seal, clumps of Anemone coronaria and Lily of the Valley, with such spring bulbs and choice perennial plants as taste or fancy may suggest.

Cut the bed in halves, and you have an arrangement of the best kind for a projecting sweep, or in fact any part of a shrubbery border. The materials are choice, perfectly hardy, of easy culture, and the novelty of the arrangement, differing as it does from the stereotyped and

somewhat monotonous repetition of more common sorts of shrubs, is precisely that which will probably tend most of all to commend it to my readers.—Edward Luckhurst.

GROS GUILLAUME GRAPE.

Mr. Luckhurst has done good service in drawing attention to this valuable late Grape, but I cannot agree with him, nor with "A Northern Gardener," or the author of the "Fruit Manual" in its being a shy bearer. "Pruned," says "A Northern Gardener," "on the orthodox spur system and with only ordinary heat it will seldom be satisfactory." Mr. Luckhurst is so rapturous as to exclaim, "Oh for an entire house of Gros Guillaume upon its own roots which could ramble unchecked and free in a wide border of sound rich soil!" In the "entire house" I cordially agree with him, not because it is a shy-fruiting sort in limited space nor when spur-pruned, but because it ripens a month later than any other Grape, swelling and colouring perfectly, though the ripening process be deferred until late in September or October. I am also thoroughly convinced that grafting to induce fruitfulness is altogether unnecessary. I have by force of circumstances but little space to do a great deal with, but small means may be as effective for a purpose as great. A miniature Apple tree may give as fine a fruit of its kind as one forty times the size, and a Vine in a ground vinery or in a small house with a very limited extent of foliage surface, a result corresponding in proportion to one with a large house to itself. A given extent of surface-foliage, that surface will only give a certain amount in weight of Grapes. It is vain to expect a Gros Guillaume, Syrian, White Nice, and other large-bunched Grapes to give as many bunches in a given space as a White Frontignan, though they will give an equal weight of Grapes from a similar extent of surface, which means that Gros Guillaume requires for the production of a bunch of 6 lbs. weight an extent of surface capable of producing six bunches of any other kind of 1 lb. weight each.

It has been stated by one of our best cultivators of Grapes that 1 lb. per foot of rafter occupied is a very fair average of the producing power of Vines, and as the Vines are planted at various distances apart the approximation appears to have no fixedness. Three feet and even less, and all distances up to 4 feet 6 inches and more, have I seen the rafters and the Vines apart; so that 3 square feet or 4½ (half as much more), or 5 or 6 square feet are equal to the production of a pound weight of Grapes. It follows that those with fine vineries, the Vines at 4 to 5 feet or more apart, can obtain 2 lbs. weight for every foot of rafter occupied; whilst those who are so unfortunate as to have the Vines 3 feet apart can only produce a pound. Poor unfortunates! For doing with Vines at 3 feet apart what others do with theirs at 6 feet, obtaining the same amount of weight in Grapes, you are considered Simons. Your bunches only weigh a pound, while the others weigh two. Do not suppose that the cultivator who grows the 2-lb. bunch is twice as clever as the other, and do not expect of having 1 lb. per foot of rafter if they are 18 inches apart, which is putting the case the other way; and if you fancy to have in place of twenty bunches of a pound weight on 20 feet of rod the same number of bunches weighing 4 lbs. each, the surface being the same, you are certain it may not be the first time of disappointment, but of overcrop and its many attendant evils present and prospective.

Three square feet of surface, I think, are required for the production, in perfection, of a pound weight of Grapes, irrespective of kind or other consideration, be it grafting or what it may, the conditions of cultivation being in other respects favourable and suited to the kind. Small-bunched kinds will give more bunches than a large-bunching kind, and though the number of bunches may be very dissimilar, the quantity by weight is not materially different. It applies equally to Vines of the same kind as to different varieties. Large bunches are not to be had in the same number as smaller from a given quantity of surface; but as the bunches are large or small according to the vigour or stoutness of the wood producing them, it follows the distance the spurs are upon the rod the bunches will be large or small in proportion to the distance, or rather space, each spur-shoot is provided with. There is of course a limit to the productive power (though Mr. Hunter's doings with Black Hamburgh tend to show the contrary) of even the "extension system," little being gained by pushing the extension too far. Nothing may be lost in quality; but the greatest produce, quality also considered, cannot be said to be attained by extended surface unless it be increasingly productive.

Monster bunches are not, though we admire them and applaud the growers, the acme to aim at in Grape cultivation, for they are as a rule had at the expense of quality. The great aim of the cultivator is to obtain the maximum of quantity and quality from given means, the two being inseparable. It is rare that large bunches combine quality with usefulness; their value is not so great for table or market as fair-sized bunches, though it may require two or three of them to weigh as much. In the market a 2-lb. bunch of Hamburghs will fetch as much as one of 4 lbs., the former being of superior quality and the other deficient in colour—wanting the characteristic of quality. The offering of prizes for the largest bunches is only encouraging bulk and coarseness. It ought to be an instruction, when such prizes are offered, that mere weight without the fullest satisfaction as to quality is not to prevail.

But after this digression I come to the small house at last. It is a low lean-to—half a foot of wall above ground, and 3 feet of glass in front, 11 feet high at the back, and 12 feet wide. The house is planted as follows:—3 feet apart two Black Hamburghs, one Black Muscat, three Lady Downe's, two Gros Guillaume, one Mrs. Pince, one Muscat of Alexandria, one Black Hamburgh, and one Muscat of Alexandria—as motley an arrangement as could be wished. The Vines are not started at all, but are allowed to break naturally, having no fire heat except to exclude frost or dry up damp from November to May, a minimum of 40° to 45° being maintained, free ventilation given by day; and to disperse damp, fire heat is given by day and withdrawn at noon, so that the heating medium is cooled down by night, a little air being left on all night all the time the Grapes are hanging. Until the shoots are stopped beyond the fire heat above-named they have none, but then we raise the temperature to 60° at night, and 65° when they are in flower, keeping the temperature 65° to 70° by day in dull weather, admitting air when sun heat raises the temperature to 75°, not exceeding 85° without full air, and this is maintained until the fruit is all ripe, except Gros Guillaume, and the temperature is lowered 5° in the course of a fortnight, and 10° in a month, when we are careful only to exclude frost and damp. The Hamburghs are ripe in August, fit to cut early in September, and they are good up to Christmas. Black Muscat of Alexandria follows in a few days, and they are in good condition at the end of February. Muscat of Alexandria comes next, they are fair up to Christmas; Lady Downe's and Mrs. Pince ripens together, and Gros Guillaume a month later than those. The house was filled with bedding Geraniums in November; all the leaves being picked off, and potted in moist soil they did not want any water or lived without until the Hamburghs and Muscat of Alexandria were cut, Mrs. Pince, Lady Downe's, Gros Guillaume, and Black Muscat not caring about a little moisture in the atmosphere so long as it is not stagnant, and can escape by the ventilators. It is a close, still, moist air that is fatal to ripe Grapes.

On the 18th January all were cut, in fact the Vines were pruned and the Grapes removed to a fruit room, the ends of the shoots inserted in bottles of water, one sort of bottle being as good as another, and those we had contained about a pint of water and bits of charcoal about a walnut size altogether to each bottle. They cut sound, the last cut April 19th.

The productive power taken in order of planting as before stated is indicated by the bunches borne by each Vine—viz., 16, 20, 20, 24, 22, 20, 17, 8, 18, 18, 18, and 20. Lady Downe's had the greatest number of bunches, and Gros Guillaume the least, 17 and 8 respectively. The Vine with the seventeen bunches did not have so good a crop as the one with eight, for one bunch was worth any four of the other, and I find it gives fully more than a fourth greater weight of Grapes than any of the other Vines. It has never missed a crop in six years, and I cannot therefore admit the Gros Guillaume a shy bearer. Of course I shall be laughed at, but I am quite proof against sneers. There is no doubt that many have such small houses, and would have Grapes in them, only they are debarred from its being represented that late Grapes require noble structures to grow them in, which they have not and cannot afford.

It is foreign to my purpose to run down longer, wider, loftier houses—they are every way deserving of leading; at the same time let us not forget that by making those the standpoint we are shutting out from a participation in the luxury of Grapes a vast majority of horticultural devotees, who grow not Grapes so much for their own use as that they may have to give to the sick, Grapes (especially late) being a luxury to invalids. Many grow flowers and fruits that they may gladden other hearts by

example, and instil into other minds a taste for the beautiful and good. Long may they prosper.

I ought to have said that the crop given as that of last year is too great for a year-to-year crop. The crop on Vines with the rafters named—13 feet 6 inches, ought not to exceed thirteen bunches for Black Hamburgh, Mrs. Pince, Black Muscat, and Muscat of Alexandria; six to eight should be the extreme for Gros Guillaume, whilst Lady Downe's will carry eighteen as well as the other do their respective number. The crop last year was for a purpose I need not here explain, and though high feeding may help with an overcrop it is not commendable.—G. Abbey.

SALVIAS FOR WINTER DECORATION.

The thought has often occurred to my mind that there is some analogy between a cook and a gardener; with the cook no sooner is one meal prepared and dispatched than another has to be thought about, and such is the routine of a gardener's life. If we have necessaries for the table and season, and plants in perfection and fit for any purpose of decoration, even this does not tell us that we may rest and be thankful. Our motto must be "Onward," and the present time demands much at our hands, for not the head at work alone will suffice, the hands must be diligent to keep abreast of pressing work.

We have feasted our eyes on the beauty of many plants during the last few months, but their mission is over for this season, and we must now turn our attention to providing others for another period of bloom.

When the days are bright and sunny, and the earth is mantled with beautiful flowers and foliage, we are apt to forget that the dreary days of winter will overtake us, but let us be on the alert and be prepared to meet those dark days with bright flowers suitable for the season. For that purpose we must now turn our attention to the Salvias, for they are very cheery flowers for the dull months of autumn and spring, for which purpose S. gesneræflora is invaluable; but S. splendens also claims our attention and is equally valuable, and being the earliest bloomer must first engage our attention. This variety after flowering is by many cut down and grown on for another year, and, perhaps, without repotting. This is a practice we never follow, for we propagate annually by striking cuttings now, or a little earlier is better; but even now good portable plants can be grown fit for most ordinary purposes. We seldom grow them in larger than 9-inch pots. A warm greenhouse, or what is called a cold pit, at this time of the year will be a suitable place to grow them in. Good loam, leaf soil, or well-rotted manure, and a little sharp sand with ordinary care will grow them well.

We hope the practice of riddling potting soil is becoming extinct; in most cases of plant-growing good drainage is essential, and also clean pots. It is not always necessary that a pot should be washed every time it is used, but the inside ought to be well rubbed-out; it must also be perfectly dry. I have heard people remark, What is the good of having a clean pot to put soil in again? Why does a workman prefer a clean bright tool to a dirty one? Simply because it is much easier to work, and the work is much better done. If anyone is dubious about this let them use a dirty pot with soil and roots adhering to its sides; let the pot be wetted before it is used, taking care not to let it dry before the soil is put in, and have the soil as dry as possible, and whenever it is thought that the roots of this potted plant have reached the sides then turn it out. If the operation has been properly carried out the result will be, the newly-made roots will have taken hold of the sides of the pot and the old soil, and, as a matter of course, the plant will be robbed of its newly-formed roots. Whereas if the pot is clean and the soil not too wet the plant and soil will turn out as clean as a sponge-cake out of the mould of a pastrycook.

As the plants advance in growth they will require frequent pinchings so as to keep them bushy. It must, however, be borne in mind that the longer they are pinched the later will they bloom, so that they ought not to be pinched later than July. S. splendens if grown in too dry a heat is liable to be attacked with red spider, for which the best remedy is the syringe night and morning. This variety will bloom well in the autumn months, lasting well up to Christmas. It will bloom better and last longer in an intermediate or a warm greenhouse. After the flowers have fallen its scarlet calyx will last a long time in beauty. S. gesneræflora succeeds splendens and blooms in the spring months. At all times during the growing season keep them as near the glass as possible, so as to prevent weakly-drawn shoots.

Plants which are already struck may also be planted-out now to be potted-up in the autumn. By this means we have had huge healthy pyramids which in spring have been very effective. S. Heerii is very similar to S. gesneræflora, but is, perhaps, dwarfer in habit; it is very useful for spring decoration. The old S. fulgens if potted will afford a continuation of its rich scarlet blooms until December, when S. splendens and S. gesneræflora will continue the succession until March. That is a period when scarlet flowers are in great request, and I know no class of plants which will give them more easily and certainly than the winter-blooming Salvias.—G. R. Allis.

VARIEGATED KALE.

Now that Beet is permissible in the flower garden in summer, surely the variegated Kale may have a place in the borders in winter. That there is a certain amount of prejudice against admitting vegetables in the parterres is certain, but it has not been sufficient to keep out the Beet even when flowers and fine-foliaged plants are abundant; therefore it should not keep out the Kales at a time when we have scarcely anything to add a ray of cheerfulness to our gardens at the dull period of the year. But prejudice cannot say the Kales are coarse, for no more elegant foliage can be found than is afforded by the fimbriated varieties; neither can they be asserted to be dull and colourless, for they range from pure white to pink, purple, and crimson. They are also hardy. Herein they possess a trio of qualities in a degree which no other plants possess during the very dullest period of the year. When other plants fail these assert their power to attract, and they preserve their attractiveness just so long and no longer than the time at which spring decorative plants unfold their charms. Thus they are emphatically winter plants, and it is on that rare quality which mainly rest their claims to culture.

It is fair, however, to presume that very often Kales are condemned without a fair trial, for it is seldom that when a superior strain is examined that the plants not only escape the penalty of threatened expurgation, but they receive the reward of appreciative praise. It is undeniable that great disappointment is felt at the result of plants which have been raised by purchased seed. In the first place, a length of time must elapse before the plants show any variegation at all, and when the variegated character is assumed it is only worthy of notice in about one plant in twenty, the rest being miserable apologies for variegated plants. This arises from the extreme sportive nature of the plants, and it is only by very special care that anything like a pure stock can be preserved by seed.

In order to have attractive plants in the autumn it is necessary to plant out extensively in the spring, so as to have a considerable number to select from, and the probability is that a choice may be made of plants both attractive in form and brilliant in colours which are well worthy of a place in the flower bed or border. To raise plants for ordinary flower-garden purposes the seed should not be sown early in spring, or the plants will be tall, coarse, and unwieldy by their long season of growth. Small compact plants are generally far preferable, and such may be had by sowing seed early in June.

In transplanting for summer growth it is necessary that the site be very exposed, and the plants be set out thinly. If planted close, in a sheltered place, they become drawn and the bottom foliage is quite spoiled. They do not show their variegation until late in the autumn, and just at the time when colour in most other plants vanishes. That is why they are valuable; and if the colours are nicely mixed a bed will be infinitely more inviting when planted with these gay Kales than it was a fortnight before by the waning bedding plants.

I have seen beds and plants of Kale in December, January, and February elicit the warmest approbation from all who have seen them, and win the praise of those accustomed to enjoy the best and brightest flowers which could be produced. Except when snow is on the ground these Kales are always attractive during the winter months. They should be planted in November sufficiently deep that the leaves rest on the ground, and the contrast with the milk-white foliage of some and the dark soil, and relieved by purple, pink, and crimson, will certainly be as attractive as any other plants in the garden. They should remain until nearly in flower, and the very best can then be removed and planted together to perfect seed. I

have frequently removed plants when in full bloom, and planted them under a north wall, where they have ripened seed perfectly.—A Surrey Gardener.

ANOTHER REQUIREMENT OF THE ROSE.

At a time when so much is said in favour of the Rose and its manifold points of beauty it may appear presumptuous in one who, like myself, has taken no share in the discussion to mention one further requirement in at least one class of Roses that does not seem to have struck the minds of those who have given us so much information on the other good qualities of the respective varieties. This may arise from the fact that they may disavow the object which I and others have in view, or it is possible condemn it altogether. But I am unwilling to believe that they will do the latter; and being also aware that my case is one of a great many, possibly outnumbering all the exhibitors put together, I at once put forth my notion of what a Rose ought to be to meet such requirements as is expected of it here and in a great many other private places where this popular flower is grown.

To come to the point, I may say that we are in the habit of cutting Roses to send away by the bushel, and most other private places where the family are not at home at the time of the Rose season expect this to be done, and who can say they have not a perfect right to do so? and who can begrudge a bunch of Roses being sent anywhere rather than allowed to waste on the tree? But there is one thing above all others I do begrudge, and that is the necessity there is sometimes of cutting several backward buds along with the bud that is just advanced to the required stage for cutting. It is this needless waste that I would like to see avoided, and some Roses have the good property of furnishing good long stalks to each individual flower, whereby they can be cut and bunched without any loss. Now, it is not, perhaps, asking too much if it were said that there are many who would be glad to have a list of the kinds that produce fairly good flowers in this way, and especially if they also are "abundant bearers." It is all very well to describe a good Rose by seeing it in a winning stand at some show, as its appearance there is improved by having a number of buds on the same shoot, but the stern economist would like all and each of these buds to do their duty by themselves: hence the advantage of having Roses on single footstalks. Of course where two or more are all advanced alike it is even better than when singly; but as this is so seldom the case, either the one is allowed to expand too much, or the others are cut too soon, and a waste takes place which is always a source of regret. As the respective merits of Roses seem now very closely canvassed, might not a class meeting the requirements of a vast number of growers have a share of consideration?

Roses for bouquets, stands, and the like form a more extensive class than for mere exhibition purposes; and though, doubtless, many kinds will serve both, the favour shown to the one so far transcends what the other has received that it is not without some shadow of justice on my side that I plead the cause of the one that does all the hard work, and would ask censors in passing an adverse opinion on a new or old variety to pause and inquire if it will suit the grower who has his flowers all to cut. Moreover, it would also be well to ask if it produces its buds in good quantities, and each one of fair average quality. A solitary grand bloom now and then will not do for the grower for market, neither for the private grower whose flowers have to be sent to London or elsewhere, however much they may suit the exhibitor.

It will be seen by the above that I am by no means insensible to the merits of a Rose for exhibition purposes; but I would certainly not admit that to be the only use this queen of flowers is intended for: on the contrary, judged by the all-important standard of utility, exhibition is only a secondary purpose it is applied to. If growers, or rather vendors of new varieties, would now and then put in a remark or two bearing on the qualities of the kind recommended for the everyday purpose it is expected to assume, much good service would be done. I am not sure but another standard of excellence differing widely from that put forth by florists in general might be required by those who cut their flowers by basketfuls. Most of us would like a stiffer stem than many of the Teas possess—say, for instance, Maréchal Niel, which carries his head in anything but military fashion, implying a rebuke on the raiser selecting such a name. A Rose of less imposing importance, supported by a firm stiff stalk that would retain its position when stuck by some dainty hand in a drawing-room vase or stand, would suit the wants of everyday requirements much better, lovely as the Marshal is pronounced to be.

Roses encased in a square or oblong box, and surrounded by gazing crowds of sightseers, doubtless has its advantages; but there seems no reason why that should usurp the only purpose to which the flowers are applicable, and as other uses offer themselves let them be turned to the best account, and the careful collector of cut Roses would be grateful to those who would increase the number of varieties producing fair good flowers in the half-expanded condition on single stalks sufficiently long for the purpose wanted. We are often pained by being obliged to cut others in a backward state with the one flower wanted, and a waste is the consequence. This matter is of more importance than may at first sight appear to be the case, and I submit it to our Rose-growing friends as one deserving their attention not less than the fragrance of respective kinds.—J. Robson.

LATE APPLES.

Good-keeping Apples are the most useful of fruits. A store which lasts in good condition month after month in the spring and summer period of the year is a store of great value. This is the period of the year to test the relative value of varieties. If they keep until now in a fresh crisp state they are worthy of honourable mention, even as much so—dare I write it—as are sweet-scented Roses. Which are really the best late sorts? I mean those which bear well and keep well without any special care. It would be interesting, and particularly useful, if those having, or have had until recently, sound Apples, would let us know their names and a sketch of the conditions under which they have been preserved. Mere size is not so much an object, neither is a very high standard of quality to go for too much at this season. Free-bearing, late-keeping, good, useful Apples are the kinds of which I think information would be acceptable. There is no difficulty in having Apples in the winter, but we want them now, and until Apples come again. What are the best for culinary purposes, and the best for dessert? I, for one, should be glad to know, and I feel sure the information would be generally acceptable. Three Apples which I have for a number of years found the most valuable are Sturmer Pippin, dessert, small, free bearer, and keeps fresh in a dark and not too dry cellar throughout June; Striped Beefing, large, sunny side red, a good bearer, and sound until June; Gooseberry Apple, medium-sized, great bearer, very firm throughout June, and often useable until August. What is the experience of others with these and other sorts?—Pyrus Malus.

PRIZES FOR AMERICAN POTATOES.

In consequence of our offering various silver cups and other prizes for American Potatoes this season, an inquiry has arisen amongst intending competitors as to which sorts of the great number of varieties in cultivation were of American origin. In order, therefore, that no confusion may exist upon this point, and that no exhibitor may be disqualified by the presentation of sorts not American, we ask you to publish for us the undernoted list of Potatoes which have been introduced to this country from America.

Alpha,	Extra Early Vermont,	Bresee's Peerless,
Eureka,	Compton's Surprise,	Bresee's Prolific,
Snowflake,	Early Gem,	Early Goodrich,
Brownell's Beauty,	Late Rose,	Garnet Chili,
syn. Vermont Beauty,	King of the Earlies,	Peachblow,
	Climax,	Early Rose.

The above list stands about in order of date of introduction, the newest varieties being first.—Hooper & Co., *Covent Garden.*

Messrs. Veitch & Sons' Fruit Prizes.—These will be competed for on the 21st of July next in the garden of the Royal Horticultural Society. The schedule has already appeared in our advertising columns, and amounts to the munificent sum of £111 to be distributed in money. This liberal encouragement of fruit-culture on the part of Messrs. Veitch at a time when the national Society is so sadly crippled is very opportune; and when we see this repeated year after year we hope that the Messrs. Veitch will in return receive the support they deserve by the extent and quality of the exhibition, to which many look forward to now as one of the events in the horticultural year.

The entries are to be made as usual at the Royal Horticultural Society, South Kensington.

ROYAL HORTICULTURAL SOCIETY.

JUNE 16TH.

FRUIT COMMITTEE.—Henry Webb, Esq., in the chair. Mr. William Stannard, gardener to H. C. Roberts, Esq., Cecil Lodge, Abbott's Langley, sent a dish of Strawberries which was exhibited under the name of Dr. Hogg, but which proved on examination to be mixed varieties. Thomas Laxton, Esq., Stamford, sent two dishes of Pioneer Strawberry, large, and fruit varying from conical to cockscomb shape, bright red colour, with small seeds slightly depressed. The flavour was brisk and good, but the Committee did not consider it worthy of a certificate. Mr. Laxton also exhibited a very fine dish of Dr. Hogg Peas quite filled, and which were sown on the 18th of March.

FLORAL COMMITTEE.—Dr. Denny in the chair. Messrs. J. Veitch & Sons of Chelsea had first-class certificates for Adiantum Hendersonii, a very distinct species; the fronds have erect footstalks, and arch over gracefully. Begonia Emperor, a very fine hybrid of the B. Boliviensis and Pearcei type. The flowers are a bright orange-scarlet, larger and of a better shape than any of its predecessors. The same firm showed Dracæna Taylori, with magnificent bronzy metallic foliage; it is a garden hybrid between D. magnifica and D. Mooreana; D. elegantissima has very neat erect-growing bronzy leaves, edged with crimson. They also exhibited for the approval of the Committee a very fine new Fern from Columbia, Asplenium ferulaceum. The plant was in too young a state to adjudicate upon, but when the sori is developed it will no doubt have the highest award. The pinnæ are finely divided, and the fronds very beautiful.

Messrs. Cripps of Tunbridge Wells sent Clematis Grand Duchess, a splendid variety, with flowers about 9 inches across, blush white and of good quality; it received a first-class certificate. C. Leviathan, a double flower, was exhibited with it. They also sent a box of flowers of C. excelsior, a fine double variety. A collection of double-flowered Zonal Pelargoniums was sent by Mr. Thomas Laxton of Stamford. Six varieties had white flowers; all of them are advances on Aline Sisley. Wilfrid is certainly the best, and well deserved the first-class award voted to it; Guiding Star is a very distinct flower of the scarlet section. From Mr. Perkins of Leamington was sent Pteris serrulata cristata and Scolopendrium vulgare aurea variegata, the latter blotched with yellow; also Lilium Thunbergianum flore-pleno. Scutellaria mocciniana, from the Society's Gardens, is a useful decorative flower, bright scarlet, with an orange lip. Messrs. Carter & Co. received a vote of thanks for Coleus Mandarin, a variety like C. Bausei. Mr. Laxton also sent a fine creamy-yellow Tea Rose, Lady Isabel Cecil; it has good strong foliage, and looks promising. H.P. Vivid is a dark flower resembling Charles Lefebvre.

A vote of thanks was given to Mr. R. Dean, Ealing, for cut flowers of a fine strain of Canterbury Bells. A plant of Primula scotica was referred to the Scientific Committee. A new Lobelia having bright blue flowers with white centre; and a new black Fansy Othello was of good shape and free-floweriog, both from Mr. Dean. Cut flowers of a perpetual-flowering Picotee Minnie sent from Mr. John Wiltshire, Beaconsfield, Bucks, were too late for the Committee. Mr. C. Ross, gardener to C. Eyre, Esq., Welford, Newbury, sent a cut truss of Crinum amabilis.

WARNING! NEW POTATO DISEASE.

WE regret to announce the appearance of a new Potato disease more disastrous in its effects by far than that from which the plant has suffered during the past thirty years. It is a fungus which attacks the plant when not more than 6 inches high: the seed tuber prematurely decays and becomes a mass of rottenness, the young tubers are consequently arrested in their growth, and the haulm withers and decays. The discovery has only just been made, and the disease is being investigated by the Rev. M. J. Berkeley, who discovered it in the gardens of the Royal Horticultural Society at Chiswick. It is remarkable that the disease is confined to the American varieties.

THE FORTHCOMING EXHIBITION AT THE LOWER GROUNDS, ASTON, BIRMINGHAM.

PRIZES of considerable value are offered for everything likely to be worth exhibiting on the 1st of July. For sixteen stove and greenhouse plants in bloom the prizes are £25, £18, and £12, with a challenge cup value twenty-five guineas to the winner of the first prize. For ten stove and greenhouse plants in bloom are one class for the trade and one for amateurs, the prizes in each being £12, £9, and £6. Good prizes are offered for specimen stove plants and greenhouse plants almost of every class, and collections of every class of Pelargoniums. The prizes for cut Roses amount to about £250 in money, and two silver challenge cups, each worth twenty-five guineas. For other cut flowers, vegetables, and fruits, the prizes are on an equally liberal scale. Such prizes will no doubt draw together a magnificent display.

The object to which the profits of the Exhibition are to be devoted is so admirable and so warmly supported in Birmingham and the midland counties generally that we hope the horticulturists of Great Britain will combine to ensure an Exhibition responding to the enthusiasm which will secure the presence of enormous masses of spectators at the Lower Grounds on the 1st, 2nd, 3rd, and 5th of the coming month. Mr. Quilter has generously provided all necessary funds for the Show, and on him all the risks depend. The beautiful grounds, now in a state of great beauty, will be devoted to the interests of the Midland Institute.

This Institute is an educational establishment where artisans and others, male and female, are enabled to continue their education after leaving school and entering on the work of life. The first stone of the building was laid by H.R.H. the late Prince Consort on the 22nd November, 1855, on a site of much value given by the Corporation of Birmingham. On the building, the furniture and apparatus used in the science classes, &c., a sum of about £18,000 was expended. Commencing with 165 students in the first year of the Institute's existence, the number in 1874 was 2179. Such a large increase was greater than the most sanguine expectations of the founders led them to expect. Large as the building is, it is totally inadequate to the present requirements, and as every year the applicants for admission increase in numbers, it has long been felt that additional buildings must be erected in order to accommodate the growing body of students. With this end in view a contiguous site has been bought for the sum of £14,000, and the erection of the new buildings is to be set about at once. Their estimated cost is £16,000. Of this total sum of £30,000, £22,000 has already been raised. A sum of £8000 is still wanted, and the profits of the forthcoming Exhibition will be handed over to the Committee as part of it.

Nor must it be forgotten, as a very strong claim upon the gardening community, how liberally the people of Birmingham gave their money to horticulture when in 1872 the Royal Horticultural Society held its provincial Show at the Lower Grounds—a Show which was more profitable to the Society than any other held by it in the provinces.

The Show will open on Thuredsy July 1, and will remain open till the evening of the Monday following. The period for making entries has been extended until Thursday the 24th inst. We sincerely hope we may have the pleasure of recording that the entries are worthy of the occasion.

ROYAL BOTANIC SOCIETY.

JUNE 16TH.

BENEATH lowering clouds, threatening rain, was the second summer Exhibition at Regent's Park held; the day, however, was, notwithstanding a shower or two, agreeable to visitors, and at the least equally so must have been the display arranged for their approval and gratification.

The bold banks of stove and greenhouse plants were the most striking feature of the Show, in some of the classes for which there was good competition. For twelve plants (open), Mr. Ward, gardener to F. G. Wilkins, Esq., Leyton, set up a group in the style of excellence in which Mr. Wilkins' plants are characterised. The most noticeable were a splendid globular plant of Erica Cavendishii quite 6 feet in diameter, and not a failing place in it; E. tricolor impressa, 4 feet across, a model of good culture; a striking Kalosanthes with more than a hundred heads of bloom; excellent Aphelexes; a Clerodendron, Bougainvillea, Hedaroma, &c. Mr. Carr, gardener to P. Hinds, Esq., Weybridge, exhibited nicely grown smaller specimens. Mr. Wheeler, gardener to Sir F. Goldsmid, staged a group made gay by four immense and well-bloomed Azaleas 6 feet high.

In the class for six stove and greenhouse plants (amateurs), Mr. Ward was to the front again with a really good group—Ixora Williamsii, Ericas, an Aphelexis and Stephanotis showing prominently. Mr. Donald, gardener to J. G. Barclay, Esq, Leyton, staged also a grand lot, and is evidently a competitor not to be played with; his Rhyncospermum, Azalea Chelsoni, and Phœnocoma were admirably grown. Mr. Toms had a nice but a more irregularly grown group.

In the corresponding nurserymen's class Mr. Williams set up a huge Genetyllis 6 feet in diameter; Anthurium Scherzerianum with thirty spathes; Allamanda grandiflora, bright clear yellow and very effective; a Dipladenia, Aphelexis, and Dracophyllum.

Mr. Morse, Epsom, staged also large, compact, and healthy plants, a Rhyucospermum and Clerodendron being very good. Messrs. Jackson & Sons had a superior group, Azalea Duchesse de Nassau and a Bougainvillea being the most noticeable.

In the Heath classes were some very fine plants, but several also somewhat loose. For six plants (amateurs) Mr. Ward staged plants not large, but bearing the impress of good culture. Mr. Wheeler's plants varying in size and merit, but not calling for special comment. In the corresponding (nurserymen's) class Messrs. Jackson & Sons, Kingston, had an irregular but well-bloomed collection, E. Nelsonii being fully 6 feet over. Mr. Morse, Epsom, also exhibited a collection which contained some well-grown specimens. In the class for nine plants (open), Messrs. Jackson & Sons, Kingston, again staged large but rather loose plants, yet fairly good; Mr. Wheeler also competing with a very nice group of considerable merit.

In the classes for Ferns many good plants were exhibited. In the amateurs' class for six Mr. Donald, gardener to G. P. Barclay, Esq., Leyton, had the largest plants. Mr. Ritchie, gardener to R. H. Prance, Esq, Hampstead, staged excellently grown plants, Davallia Moreana being 7 to 8 feet over and very fine. He had also a good Cyathea, Dicksonia, &c. Mr. Sheen, gardener to E. Brooke, Esq, Highgate, and Mr. Child had remarkably good groups, Adiantum farleyense being very fine in these collections. Mr. Carr, gardener to G. P. Hinds, Esq., also staged fresh, healthy, half-grown specimens in good condition. In the nurserymen's class Mr. Williams had large Alsophilas, a Dicksonia, two capital Gleichenias, and a nice Adiantum farleyense. This was a fresh healthy group.

In the classes for fine-foliage plants valuable groups were exhibited. A bright and beautiful collection, but not the largest plants, were staged by Mr. Legge, gardener to S. Ralli, Esq., Clapham Park. His Crotons Weismanni and interruptum were in fine colour, Alocasias were capitally grown, and the whole group in the first order of health. Mr. Donald staged large and really good plants of Cycas circinalis, a Pandanus, Crotons, an Alocasia, and Chamærops humilis. Mr. Strahan, gardener to P. Crowley, Esq, Croydon, had also glossy plants of great excellence. Mr. Carr, Mr. Ritchie, Mr. Child, Mr. Toms, and Mr. Wheeler also exhibited highly creditable collections. In the nurserymen's class Mr. B. S. Williams staged a fine Pandanus Veitchii, two Crotons, two Palms, and a very good Gleichenia.

The Orchid bank was one of finest of recent years. In the amateurs' class for twelve plants Mr. Ward, Mr. Wheeler, and Mr. Heims competed with not large but clean healthy plants of the well-known popular kinds. In the corresponding nurserymen's class Mr. B. S. Williams had a group of great excellence, and Messrs. Jackson & Sons also staged an excellent group. The principal plants have been previously enumerated, and it must suffice to say they were in the first order of health, and in brilliant condition.

In the class for six plants (open), Mr. Denning, Mr. Ward, and Mr. Williams exhibited grand collections in the richest state of bloom. Mr. Morse and Mr. Ritchie also staged capital plants. Mr. Denning also exhibited six plants in the miscellaneous class, the spikes of bloom of Odontoglossum coronarium and Aërides maculatum being the most noticeable.

Roses were not numerous. Messrs. Paul & Son, Cheshunt, exhibited large plants, amongst which Camille Bernardin, Juno, and Céline Forestier were the most effective; also a remarkably well-grown collection in 8-inch pots. This firm also exhibited cut blooms of a new Rose named, in commemoration of His Majesty's visit to the Show, the Sultan of Zanzibar. This is an English seedling, with velvety petals of extraordinary richness; it is not sweetly scented. Messrs. Veitch also sent a handsome group of Roses in pots, small plants, with several boxes of cut blooms. Mr. Turner also exhibited cut blooms of great merit.

Pelargoniums made a grand display. For nine show varieties in 8-inch pots (open), the largest were from Mr. Ward; his plants were 3 to 5 feet across. Smaller plants, but with larger and better blooms, came from Mr. James. Messrs. Dobson and Sons had a nice even lot. In this class Mr. Turner, however, had the finest flowers. Ruth, a charming salmon-pink, should be grown by everyone; Charlemagne, Pompey, Blue Bell, Sultana, and Prince Leopold are also varieties of undeniable merit. In the amateurs' class for six plants Mr. James and Mr. Herrington staged very good plants. In the class for six fancy Pelargoniums in 8-inch pots (amateurs), Mr. James, gardener to G. W. Watson, Esq., Isleworth, staged handsome examples of culture, the plants averaging 4 feet through, and densely bloomed. Mr. King, gardener to R. Fenn, Esq., Esher, having also plants in first-rate order. Mr. Donald also exhibited nice plants. In the corresponding nurserymen's class Messrs. Dobson & Sons had nice little plants, but far behind the amateurs in quality. Mr. Turner staged remarkably well-bloomed small plants, and also exhibited several new varieties. In the class for six Zonal Pelargoniums in 8-inch pots (amateurs), Mr. King, gardener to R. Fenn, Esq., Esher, had beautiful flat plants 4 feet across, Clipper killing the rest by its brilliant colour; the lights, Rose Rendatler, Delightful, and Mrs. W. Paul being good. Mr. Herrington staged larger plants, Clipper being again the brightest. Mr. Catlin also exhibited well. Really fine new Zonal Pelargoniums were exhibited by Mr. Burley, Brentwood, and raised by R. B. Postans, Esq.; Squire of Weal, scarlet; and Leveson Gower, salmon, being the best in their colour which we have ever seen. The same exhibitor also sent a brilliant Coleus Alexander Ogg.

In the class for eighteen hardy herbaceous plants, in three genera, Mr. Parker, Tooting, staged a remarkably well-grown and attractive collection, comprising Liliums, double Pyrethrums, Spiræas, the pretty Erigeron purpureus, Orchis foliosa, &c., also cut blooms of double Pæonies and Pyrethrums. Mr. Wheeler also exhibited hardy plants.

In the miscellaneous class Messrs. Veitch & Sons set up a large, rich, and valuable group, from which it is impossible to select the best by the general high quality of all. The Gloxinias were splendid. Mr. Williams also staged a superior collection. Messrs. E. G. Henderson & Son staged new fine-foliaged plants, richly coloured Tricolor Pelargoniums, and good Calceolarias—a bright and good collection. Mr. Laing and Mr. Lay, Croydon, had good groups; and Messrs. Rollisson & Sons exhibited a fine pan of the charming Bertolonia Van Houtteii, Dionæa muscipula, and Pteris serrulata var. Applebyana. Mr. Bull sent excellent Dracænas and Crotons, also a fine mixed group of plants, including a new climbing plant, Marcgravia paradoxa, with green Begonia-like leaves, clinging as closely to a board as if they were gummed. Mr. Bull also exhibited the decorative Pelargonium Victoria, which is a variety of great usefulness. Nine handsome Caladiums were exhibited by Mr. Clarke, gardener to W. Shuter, Esq., Hampstead; and six beautifully grown Mosses were staged by Mr. Mearing, gardener to W. Whitley, Esq., Guildford.

About twelve o'clock the Sultan of Zanzibar and suite arrived at the Exhibition. The greenhouse plants and Roses appeared to have greater attractions for the distinguished visitors than the Orchids and tropical plants. They appeared much gratified with the display, and well they might be, for it was one of great excellence. We had not time to wait for the awards.

EARLINESS OF THE SEASON IN THE ISLE OF MAN.

As an illustration of how early a season it is here this year, I may state that Potatoes which I planted on the 1st of March were dug on the 27th of April, and then averaged ten full-sized tubers per root, averaging about 3½ inches long. These were grown in the open air without a particle of protection of any kind—not even a little litter.

I have hundreds of Roses in full bloom in the open air, and had abundance of them all through the last week in May. Not only the Hybrid Perpetuals, but such Roses as Homère, Triomphe de Rennes, Céline Forestier, Lamarque, and Climbing Devoniensis are perfect sheets of bloom, and the old Gloire de Dijons are perfect masses of bronzed yellow.—A. D., *Ramsey, Isle of Man.*

Peach.—*The Condor.*—"We received the specimens of this handsome Peach last summer from Messrs. Rivers & Sons of Sawbridgeworth. The sample we obtained was about medium size, of a roundish depressed figure, with a deep suture, terminated by a small nipple-like point. The surface was very finely downy, and the whole fruit tinted as if washed over rather lightly with pale rosy red, the colour not being very dark at any point, while towards the crown it became a little marbly. The flesh was whitish, slightly blotched with red about the stone, and very juicy, rich, and piquant in flavour.

"Our examples were received about the end of July, and had therefore probably been grown under glass. The variety is said to have been raised from Early Silver, and to be a large Peach of a bright crimson colour, ripening early in September. The glands of the leaves are reniform."—(*Flor. and Pom.*, 3 s., viii., 133.)

[The plate of the Condor Peach is a very inadequate representation of that variety both in size and in colour. The Condor is a large fruit, indeed one of the largest Peaches grown, and its skin has a pale flesh colour, over the surface mottled with a deeper shade of the same, and not the brownish orange which is given to it in the plate.—Eds.]

Hereford Rose Show.—An advertisement announces this to take place on the 29th inst., and as we are told that it is the oldest of our Rose Shows, and certainly its prizes are very

liberal—its firsts being £12, £6, £5, and £3, with others in good proportion—we think it is most deserving of encouragement.

FRAGRANT ROSES.

I HAVE waited for some of the known authorities in Rose culture to take up Mr. Camm's subject—fragrant Roses; and as this is not yet forthcoming, and as I have long interested myself by specially noting, year after year, all the best Roses known as to their fragrance, I beg to offer for the benefit of your readers a list of the most fragrant of those Roses otherwise also most desirable and good; and though smell, like colour, is hardly a sense to be dogmatic about, yet I do offer the list as quite trustworthy:—Abel Grand, Bessie Johnson, La France, Comtesse C. de Chabrillant, Edouard Morren, Centifolia Rosea, François Michelon, Jules Margottin, Louisa Wood, Mad. C. Joigneaux, Alfred Colomb, Beauty of Waltham, Dr. Andry, Duc de Rohan, Général Jacqueminot, Mdlle. Marie Rady, Marie Baumann, Senateur Vaisse, Camille Bernardin, Duchesse de Caylus, Charles Lefebvre, Louis Van Houtte, Mad. Victor Verdier, Claude Levet, Fisher Holmes, Duke of Wellington, Duchesse de Medina Cœli, Prince Camille de Rohan, Pierre Notting, Vicomte Vigier, Xavier Olibo, and Mons. Boncenne. All the above are Hybrid Perpetuals, and are, so far as I know, the most delightfully fragrant; at the same time and in all other respects they are the most to be desired of the Roses actually in cultivation.

I would remark there are differences in the character of the scents, though I think, broadly speaking, they may be reduced to a family of two, La France and Abel Grand representing one character or type, and Louis Van Houtte and Vicomte Vigier the other, though I know not which type is the more delicious.

As to Teas, Madame de St. Joseph, Devoniensis, Goubault, Souvenir d'un Ami, Maréchal Niel, and Madame Margottin are the most delicious; but I must add many Teas have little scent, and some few are even offensive at times.—AMATEUR.

DOUBLE PYRETHRUMS.

NOT greater is the difference between the common Daisy and the most perfect German Aster than exists between the common Pyrethrum and the beautiful double flowers which have been exhibited at South Kensington by Messrs. W. Kelway and Sons. The improved varieties of the double Pyrethrums are, when well cultivated, border flowers of great value and usefulness, and will find their way into all gardens where hardy flowers are cherished. The varieties referred to were not flat unsymmetrical blooms of dingy colours, but were handsomely-shaped blooms, perfectly double, and in colour clear and decided.

We have here a class of plants which are deservedly rising in public estimation, for they are free in growth, hardy, effective in the garden, and attractive when used as cut blooms, for which purpose they are particularly adapted, as they last and travel well. These plants are of the most easy culture, and will contribute a valuable feature to mixed beds and borders, where they are certainly worthy to have a place. To grow them to perfection, however, they should be cultivated in beds to themselves, where deep and good soil and a liberal supply of water can be given (liquid manure occasionally), and such blooms will be produced that will grace any exhibition of cut flowers.

When kept in pots they can be planted at any time, but established plants are best increased by division in the spring just when they show the signs of growth after their winter's rest. They will flourish in any ordinary garden soil enriched with manure, and will bloom from May through the early summer months if duly supplied with water. As they grow each stem should have a separate stake, or the heavy heads injure each other by being battered with the wind.

The following varieties are the best down to the present time; they vary in colour from pure white to rich crimson, with shades of yellow and lilac. The blooms are as perfect, large, and full as are those of quilled Asters, and they are made known simply because they are worthy of being grown by all who ornament their gardens with hardy border flowers. Paul Gaurnal, bright pink; Capt. Nares (Kelway), crimson; Duchess de Brabant, rose; Mons. Barrel, purple crimson; Ceres, flesh; Adonis (Kelway), bright rose; Nemesis, rose and bronze; Imbricatum, crimson and white; Mont Blanc, white; Wilhelm Krumper, mauve; Galopin (Kelway), crimson scarlet; Cleopatra (Kelway), white tinged yellow; Eugénie (Kelway), white; and Duchess of Edinburgh (Kelway), rose and white. The above are varieties of undoubted merit, and if justice is done them in cultivation they cannot fail to give satisfaction to those who possess them.—J., *Battersea.*

RAVAGES OF THE GOOSEBERRY BORER.

THE Gooseberry is very extensively grown in the village of Grindleton, four miles from Clitheroe, and the gardens are this year visited by a pest which threatens to annihilate the crop. It is in the shape of a greenish white grub or caterpillar, which perforates the fruit, and this then falls off. So extensive are its ravages, that one man estimates that there are now six hundred quarts of Gooseberries lying under his trees, and my informant says that he has forty dozen quarts (the Gooseberry is here sold by the dozen quarts) under his own trees. As I have not seen the pest I do not know whether it has legs like a caterpillar or is like a maggot, but I fancy it must be a caterpillar, as my informant says that when it has finished one berry it goes to another.

This pest is quite new to me, as, although I have grown this fruit for fifty years, I never saw anything of the sort either in my own garden or in the gardens of any of my friends; but it seems to have been known for some years at Grindleton, though never to the same extent as this year. I am sending a man for some of the berries with the pest in them, and mean to send you some specimens, for I fancy they cannot be generally known, or I should have seen some notice of them in your columns. The only pests to the Gooseberry here are the caterpillar of the sawfly and the green aphis; but this pest at Grindleton is represented to me as far worse than either or both together. I recommended my informant to scrape up all the Gooseberries from the ground, and either burn or scald them immediately.—J. G.

[The Grindleton pest is the caterpillar in its young state of a small pretty moth, called by entomologists Geometra vauaria. The caterpillar is commonly known as "the Gooseberry Borer." The berries with the caterpillars in them should be gathered together and destroyed, for they will speedily give birth to moths. The moths will appear at the end of this and in the next month, and children and others should be employed to catch them. The moth is thus described by Professor Westwood, with a coloured portrait, in his "British Moths and their Transformations:"—"This common insect measures about 1¼ inch in expanse. The wings are ashy white or pale ashy brown, with four generally equidistant chocolate-coloured patches on the costa (front edge), the third of which patches is slender and oblique, and the fourth larger and rather square. Adjoining the second is a dark mark like the letter < thus placed; beyond this is a row of minute dark dots placed on the veins; the hind wings are nearly immaculate, but with a small dusky spot in the middle. The caterpillar is brownish or greenish (those sent to us were green) spotted with black and slightly hairy, with a pale dorsal line and yellowish lateral lines."]

OUR BORDER FLOWERS—UVULARIAS.

A SMALL group of spring and early summer-flowering hardy herbaceous plants, chiefly from North America, introduced more than a hundred years ago, but are very rarely met with. They are well adapted for either rockwork or border culture, where they have an elegant appearance when they have attained their growth. Under favourable circumstances the taller kinds will grow nearly 2 feet in height. They require liberal treatment and thorough drainage. The ground should be broken up to the depth of 2 feet at least for their reception, and should have some good sandy loam, a little peat, with a portion of well-decomposed manure worked in for them to grow in; when well established they last many years. The plants are liable to be attacked by slugs, and should be carefully watched while the shoots are in a young state.

Increase is effected by root-division, which is best done when the plants have matured their growth. They enjoy the full sunshine, and should not be crowded or shaded by other plants, otherwise they will not be seen to the greatest advantage. The dwarfer kinds are fine objects on the rockery, and in the border Uvularia perfoliata when well established has a very elegant appearance; the same may be said of U. amplexicaulis. I look on this as the best of the group, and not despisable for exhibition purposes. U. flava is of very

dwarf habit, suitable for the rockery. U. lanceolata is a charming plant for the border, and one of the tallest of the family. There are several other kinds of this interesting family of border flowers that will well repay any little labour bestowed upon them.—Veritas.

CUCUMBER, TENDER AND TRUE.

In the garden at Farning Woods, the seat of Lord Lyveden, we recently saw that excellent Cucumber Tender and True growing for the first time. It is now some time since it was certificated by the Royal Horticultural Society, but the difficulty of procuring seed from it has hitherto prevented it being grown to any extent. At Farning Woods Mr. Freeman, the skilful gardener at that place, succeeds with it to perfection. In a low span-roofed Cucumber house it is producing fruit of the handsomest kind in great abundance, and Mr. Freeman considers it the finest Cucumber he has ever cultivated. Our own observations confirm all Mr. Freeman has said in its favour, for nothing could be more handsome; and its great merit is the rapidity with which it comes to maturity. In fifteen days from the time of setting, the fruit is as many inches long, and the fine prolific plant in the house had been produced in ten weeks from the sowing of the seed.

INTERNATIONAL HORTICULTURAL EXHIBITION AT COLOGNE.

We have received from Mr. Robert Warner the following extract from a communication he has received from the President of the Exhibition:—"The Minister of Agriculture has put at our disposal six large medals of state, which the Jury will have to award for the best horticultural, &c., contribution to the Exhibition. Moreover, Her Majesty the Empress-Queen has graciously promised a special prize of honour, and undoubtedly His Highness the Crown Prince will do the same."

The Carter Cup value fifty guineas, of which the accompanying is an engraving, and other valuable money prizes for vegetables offered by James Carter & Co., are to be awarded at the Royal Horticultural Society, South Kensington, July 7th, 1875. For the best collection of vegetables, twenty-four dishes: First prize the "Carter Cup," value fifty guineas, to become the absolute property of the employer to whom the prize may be awarded, also 10 guineas for the gardener; second prize, 7 guineas; third prize, 5 guineas; fourth prize, 3 guineas. All vegetables to be grown by *bona fide* gentlemen's gardeners or gentlemen amateurs, and, excepting Cucumbers and Melons, in the open ground.

Fig. 109.

Largest Peach Orchard in the World.—Mr. Shellcross, who resides near Middletown, Delaware, owns the largest Peach orchard in the world. Last year he shipped to New York 125,000 baskets of fruit, and it is estimated that he lost, by being unable to procure labour to pick, about 25,000 baskets more. On several days he loaded from his orchard ten carloads. Mr. Shellcross's orchard reaches along the public road for more than eight miles—generally on either side—and covers an extent of upwards of a thousand acres, on which is growing more than a hundred thousand trees. The land on which Mr. Shellcross's trees are planted is worth 150,000 dollars.

THE GOOSEBERRY CATERPILLAR.

The green caterpillars, larvæ of the Saw-fly (Tenthredo grossularia), are earlier and more numerous this season than I ever remember. I can vouch with some of your correspondents that the cuckoo is a great enemy to them, and so are sparrows and chaffinches. The easiest way which I know of eradicating them is to keep a sharp look-out as soon as the insect comes into real life, and look over the bushes three times a-week and pick off the leaves that the insects have been hatched on. There will be twenty-five to forty on a leaf. A small boy will look over two or three hundred in a day, and if this is continued for two weeks or so there will be no danger from these pests. I have about six hundred bushes, and this is the way I almost defy the caterpillar.—J. Addison, *Ormiston*.

CUT-BACK ROSES.

In answer to "E. A. W.," I have to say that I am writing principally in the interest of Rose exhibitors, but my remarks apply with far greater force to those who merely want garden Roses, as there can be no question that the blooms on cut-back Roses are much more profuse than on maidens. By the term "cut-back Roses," I mean Roses other than maiden plants; Roses which come from nurseries, or old plants in the garden which have been pruned. I did not think at the time I used the term that anyone would not know its meaning, or I would have written more at length. A desire to save your space, as well as a wish to make my articles lively and pleasant to your readers, makes me use terms which are well known to all large growers, but may prove enigmas to the uninitiated. Concerning pruning, I will write to you at length before next season.—J. B. M. Camm.

LOXFORD HALL.

Not a place of imposing appearance is Loxford Hall. It is no castellated structure with terrace and moat surrounding it, or the ancestral home of a long line of landed magnates, but it exemplifies the position of those of whom a nation may be proud to boast. Loxford Hall is a plain brick building, cosy and comfortable; but it is noted mainly for its gardens, its worthy occupier having invested freely and liberally in erecting structures on a large scale, and in a substantial manner, for the culture of flowers and fruit, of which the metropolitan and provincial exhibitions have seen such superior examples. In the management of these gardens it is pleasing to record the confidence which exists between master and servant; hence it is that Mr. Whitbourn and his able gardener Mr. Douglas have done and will do so much for high-class and useful horticulture.

To the readers of our Journal a sketch of this garden cannot fail to be interesting, seeing that in our columns the "Doings" of its manager are literally household words—teachings given by actual example, profitable and valuable because thoroughly practical, and a faithful reflex of current work. A celebrated man when asked as to the character of a contemporary celebrity replied, "I do not know, as I have not lived with him"—a cautious and a pregnant answer. Ours, too, is a practical age, and while we are pleased to hear what a man has to say, we are only quite satisfied when we see what he does. We see Mr. Douglas's doings in the Journal, let us now glance at them at Loxford. Does some one inquire if he really does all that he says? the reply is, Yes, and more, for like most able men Mr. Douglas possesses a modesty which forbids any parade of his own works. He does not hesitate to tell us if mealy bug finds its way on a Stephanotis, or red spider on a Vine, or if an Orchid is injured by fumigation. Many would hesitate to acknowledge such incidents as being evidence of unskilfulness, but a cultivator conscious in his own strength and desirous to be the instructor of others, can afford the risk, and does not hesitate to tell of a mistake or an untoward occurrence when with it goes a proved remedy or timely precaution. Mr. Douglas will tell us all that, but he will not pourtray his noble Grapes, splendid Pines, excellent Strawberries, and fine stove plants, Orchids, and Aurieulas.

It may be seasonable to adopt his familiar headings, and look first into the

STOVE AND ORCHID HOUSE.

This is a span-roofed structure of moderate size, having a

central stage and marginal trellis with a pathway round and between the plants. The first plant which arrests attention is the Clerodendron Thomsoniæ. It has long been a dense wreath of white and crimson bloom, and indeed a splendid object, affording cut flowers in great abundance and of long duration. Mr. Douglas has good reason to recommend this as a roof plant, as enjoying a singular immunity from insects, is a free grower, at once ornamental, useful, and long-lasting. It is planted-out behind the pipes in a narrow border along the base of the wall. This is clearly the way to grow this valuable decorative stove climber. It has as a companion the well-known Stephanotis, the glossy leaves of which denote that soapy water has been used, or they would not be so clean and handsome as they are, or its waxy flowers be of such great size and substance. It is also planted out, and is evidently enjoying the treatment. Another useful roof plant, as yet young but flowering freely, is the Bougainvillea spectabilis.

The general collection comprises Ferns, Palms, and fine-foliaged plants in the very first order of health. It is not necessary for a plant to be new to have a home at Loxford, but only requires to possess merit, when justice will be done it; hence we find the Alocasia metallica still cared for and splendidly grown; Eucharis amazonica in exuberant health, and affording three crops of flowers each season. The reason why some fail with this plant is, Mr. Douglas believes, that they have the "shy-flowering variety." It is well to mention this as explanatory of the productiveness of the plant in one place and its barrenness in another. Anthurium Scherzerianum is in fine form as to size of plant and number of flowers, a duplicate plant being remarkable for the great size of its spathe. Dracænas are well grown, D. Cooperi being especially brilliant in colour. This and D. terminalis are still as useful as ever, notwithstanding the claims of the newer introductions. D. reginæ is also in robust health. Caladiums are well grown and in the full sun; C. Belleymei and C. argyrites alone requiring shade. When grown in the sun the leaves are better in colour and texture than are those in the shade, which are flimsy in comparison, and flag on being moved from place to place.

The best of the Palms are Cocos Weddelliana, an elegant pair of the most elegant Palm in cultivation; the Cocoa-nut Palm, Cocos nucifera, raised from the nut, the shell of which still envelopes the stem; and the fine bold Palm Phœnicophorium Seychellarum. Areca "aurea" is also grown as green as a Portugal Laurel, the yellow hue disappearing under good cultivation, which is the best cure for "aurea" in other plants besides this misnamed species.

Ferns are admirably cultivated. It is not necessary to enumerate, but we noticed two which should be in more general cultivation—Adiantum colpodes, the young fronds deeply tinted with pink, and Davallia polyantha, a species with fine spreading fronds, both fertile and barren, each being very distinct. There are also fine examples of D. Mooreana, Pteris scaberula, and Stag's-horn Fern, Platycerium alcicorne.

Turn we now to the Orchids. The collection is not extensive but choice, and the plants are in undeniable health. In bloom were Dendrobium Macarthiæ, beautiful, and remarkable for its long-lasting property; D. Devonianum, D. Bensoniæ, of faultless beauty; D. Farmeri, and D. thrysiflorum carrying a raceme which for size, symmetry, and colour has probably never been surpassed. Oncidium phymatochilum had a grand spike laden with quaint flowers; O. papilio and others were also in bloom. Lælia purpurata was exceedingly fine both in size, and richness of colour, and Cattleya gigas showing. This beautiful species can only be grown on a block, where it is now doing well. Masdevallia Harryana is remarkably fine; but even more brilliant in colour is a distinct species in this collection, and worthily named M. Whitbourniana. It is of the most fiery magenta colour imaginable, and very free. Calanthe veratrifolia is also striking, and Mr. Douglas will oblige by informing us how he grows this useful plant so well. Also in bloom is Strelitzia regina, a remarkable plant, the flower stem being 4 feet high, surmounted by brilliant orange and purple flowers of singular form and very striking.

GREENHOUSE AND CONSERVATORY.

Here is a splendid plant of Lapageria rosea in the rudest health; it is planted out and covers a large space on the lofty back wall. Azaleas, of which there are good specimens of Criterion, Iveryana, Magnificent, very pure, Duc de Nassau, Duchesse Adelaide de Nassau, &c., were in fine bloom at the time of our visit.

Seedling Azaleas, of which Mr. Douglas has a fine batch, are also opening, some of the flowers being of immense size and semi-double, a most promising lot of plants to be watched with interest. Mr. Douglas grows the Oleander (Nerium splendens), which is one of the best of conservatory plants. Tree Carnations, of which we have a hint now and then, have immense blooms, and are found invaluable. Roses were heavily laden, a small houseful of them, but we can only name one as a button-hole Rose—Madame Jules Margottin—which is truly lovely for that purpose.

Aquilegias were in beautiful bloom. Why are not these more grown? A. pyrenaica is very rich and effective, so also is A. cærulea, to say nothing of the fine and stately yellow A. chrysantha leptocera aurea which has deservedly won a first-class certificate for its excellence. A long narrow house is devoted to Liliums, of which a large number of choice sorts are grown. L. Humboldti is throwing three spikes, one of them containing thirty buds. L. puberulum, L. Washingtonianum, L. californicum, &c., are also very vigorous. Most useful during the summer will be this valuable collection.

FRUIT HOUSES.

Fruit from these houses has frequently proved the best of the best, having secured first honours in Grapes, Pines, Melons, and Cucumbers at the principal exhibitions. It has been hinted that there are employers who calculate prize-money as a part of their gardeners' wages. It is not so here, and we record it in honour of Mr. Whitbourn that the more his gardener has won the more has he increased his remuneration. That is a just encouragement of merit, a recognition of energy, labour, and skill, and the greatest incentive to sustained effort and devoted service. But to the fruit, commencing with the

Vineries.—We will neither count the houses nor the Vines; suffice it to say the early house is not large, but the Grapes in it are. The Black Hamburghs are ripe—several bunches cut, and for those who may think that prize bunches are chance bunches, one big to ten small, we may fearlessly say that almost every bunch in the house might fitly grace an exhibition table. We have seen larger bunches, but crops of such level excellence as is this are certainly few and far between. The berries are black, large, and "hammered," and their finish is almost perfect. The crop is regular, the bunches being as large at the bottom as at the top of the house, and the yield is a full one. The Vines are planted inside, but the roots have access to outer borders. The inside borders are mulched, and the Vines well supported.

The pruning is what may be termed the long-short-spur system, and we note Mr. Douglas is not above laying-in a young shoot where he wishes to have a good bunch. The young wood is thinly disposed, not the slightest crowding, but still a leaf wherever the sun can shine on it. The shoots are stopped two or three leaves beyond the bunch, as there is space for them to occupy, the object being to lose neither leaves nor light—that is evidently the principle of the summer routine of dressing. There are no rambling laterals, and no red spider, dust, or dirt. That is how are produced these beautiful Black Hamburghs and clear and bright Buckland Sweetwaters which have made Loxford famous.

We step into a later house. Thinning is going on. But what is that Grape, the bunches touching each other, each 18 inches long and heavily shouldered? That is Waltham Cross. Soberly speaking it is a splendid sight. If Mr. Paul has done honour to pomology in raising that Grape, Mr. Douglas is doing honour to Mr. Paul by growing it in this manner. By its side is Royal Ascot, a splendid crop of great promise, growth vigorous and bunches fine. Snow's Muscat is carrying a great crop of very even bunches. Douglas's Seedling, a pretty Grape, is also swelling-off freely a nice crop.

We pass outside, and between one house and the next is covered-in—a glassed space 5 feet by 3 feet. In this is planted a Muscat of Alexandria; the cane is taken in the end of the house, and trained horizontally along the base of the rafters. From this horizontal main are three canes trained up the roof at wide intervals. The space in which the Vine is growing is 5 by 3, and 3 feet deep. From this root-encased Vine is a crop of Muscats, which for full setting and regularity of bunches and berries is a sight worth a long journey to see. The bunches are models of perfect setting and swelling. In Grape-growing we have seen nothing more interesting than this industrious Vine. Bones fresh from the butchers were broken and mixed in the soil, which is the only difference in its treatment from the rest. If that is the secret of its remarkable health, we can

only conclude that there is much virtue in raw bones. Mrs. Pince's Muscat is also bearing heavily. But we must leave these well-managed Grapes to glance at the

Pineries.—Pines are not largely grown, but are as good as the Grapes. The plants are dwarf, dark green, and vigorous, and throwing-up fine fruits. That Mr. Douglas can take great prizes from such a few plants is the more to his credit. In most cases Vines are grown overhead but do not overshadow the Pines, but in every house every plant is healthy.

Melons and Cucumbers.—These are grown in houses on trellises. The Melons are in cleanliness and health all that can be wished for—the fruits even in size on each plant, and swelling regularly. Victory of Bath and Scarlet Gem are esteemed the best in their sections, but Mr. Douglas mainly grows his own hybrids, and with these satisfies at home and wins prizes abroad. Of Cucumbers a word must suffice. If Mr. Douglas had done nothing but raise Tender and True he would, as Mr. Camm says, "deserve well of his country," for it is the best Cucumber that has ever been given to the public.

Tomatoes are grown in pots at the back of the house. The crop is very large and the fruit ripe, affording gatherings of great value and usefulness.

Strawberries.—The fruit then staked-up above the plants, large, and colouring well, is now gathered. The plants are grown in 48-sized pots, perfectly healthy, and free from red spider. Dr. Nicaise is bearing a heavy crop of fine fruit, but large numbers of plants are Mr. Douglas's own seedlings, which require more time to prove their worth; we can only say they look well.

ORCHARD HOUSE.

This is a good-sized structure, filled with large trees in disproportionally small pots. Pears, Cherries, Plums, Peaches,

Fig. 110.—Loxford Hall—the pleasure grounds.

and Nectarines are thoroughly clean and bearing heavily. It is only by skilful culture that such crops can be perfected. We have no more to say about the fruits, but in this house is a novelty worthy of mention. Phormium tenax variegatum is throwing-up a spike of bloom. The spike is fully 11 feet high, and producing numerous branchlets. The plant is healthy, with fine striped foliage 5 to 6 feet in length, and is a specimen of great value and interest. Mr. Douglas must describe it when in bloom, for such a circumstance is rare if not unprecedented.

FLOWER GARDEN.

Of bedding-out there is little to mention. Mr. Douglas is too much of a florist to indulge in massing and grouping. What beds there are, are filled with fine plants which have not much growing to do to meet. The lawn is planted with a few good Conifers, but the grass is burnt up by drought, the soil, about 3 inches, resting on gravel. It is beds of Pinks, Carnations, Phloxes, Gladiolus, Hollyhocks, &c., grown thoroughly which constitute the flower garden here, with a few herbaceous plants, the brightest and best at the present time being Lithospermum prostratum, recently noticed in these pages. Remarkably effective is also a bed of the old Giant Brompton Stock with blooms as large as Roses, a valuable and nearly lost strain of this fine old garden flower. Mr. Douglas prizes it, and well he may. There is also a bed of Scilla peruviana blooming, the plants raised from seed sown six years ago.

KITCHEN GARDEN.

This is two acres in extent and well cropped. It is only by thoroughly working that such a soil can sustain the fruit trees and vegetables in good health. Strawberries are very promising, so also are the large fruits. The trees are duly pinched and pruned; they are not toy trees, but such as bear great quantities of fruit. The walls are covered with trees, fan-shaped, vertical and oblique cordons—indeed something in every style of gardening is carried out here, and carried out well. Peas are looking well, the earliest now gathered. All the new sorts are grown, William the First is the first and best, and Alpha second. Premier Gem is very fine in growth and habit, and regarded as a valuable acquisition. G. F. Wilson and the best mid-season sorts are in the full vigour of active growth.

Our parting word must be with the

Auriculas.—These are Mr. Douglas's favourite plants, and right well he grows them. His collection is extensive and choice. They are repotted and growing vigorously in frames at the north side of a wall. Something has been said on cutting down the plants; Mr. Douglas cuts them over with as little compunction as he does a Geranium. We take as an example Colonel Taylor. The label denotes that it was cut down on April the 30th. The top is already struck, and is a stocky sturdy plant, and the plant has pushed five shoots now an inch long to form five plants by the same course of beheading. It is the only way of increase, and is certain when

carefully done. The wounds are dressed with lime. If any fanciers have scarce sorts which they wish to become more plentiful they had better send them to Loxford, for these plants are very tractable in Mr. Douglas's hands. Our notes are concluded by thanking Mr. Douglas for his courtesy and attention.

DRACÆNAS.

Very unlike the usual ornamental-foliaged plants we find in our stoves is the example now figured. The engraving represents a matured specimen—a tree, while those usually grown as decorative plants are more or less succulent, like other young trees, and are furnished with beautiful arched foliage to the surface of the pot. As the plants attain age the lower leaves mature and drop off, and the stem assumes its ligneous character. Yet by high culture and skilful treatment the foliage is retained until the plants attain a height of several feet, increasing in size with the plant, and also improving in colour. The system adopted is to preserve the plant in a succulent state as long as possible, by preventing woody layers being formed, or, at any rate, consolidated. Such plants are very beautiful, as the examples which have this year been exhibited by Mr. Bull and Mr. Wills sufficiently testify.

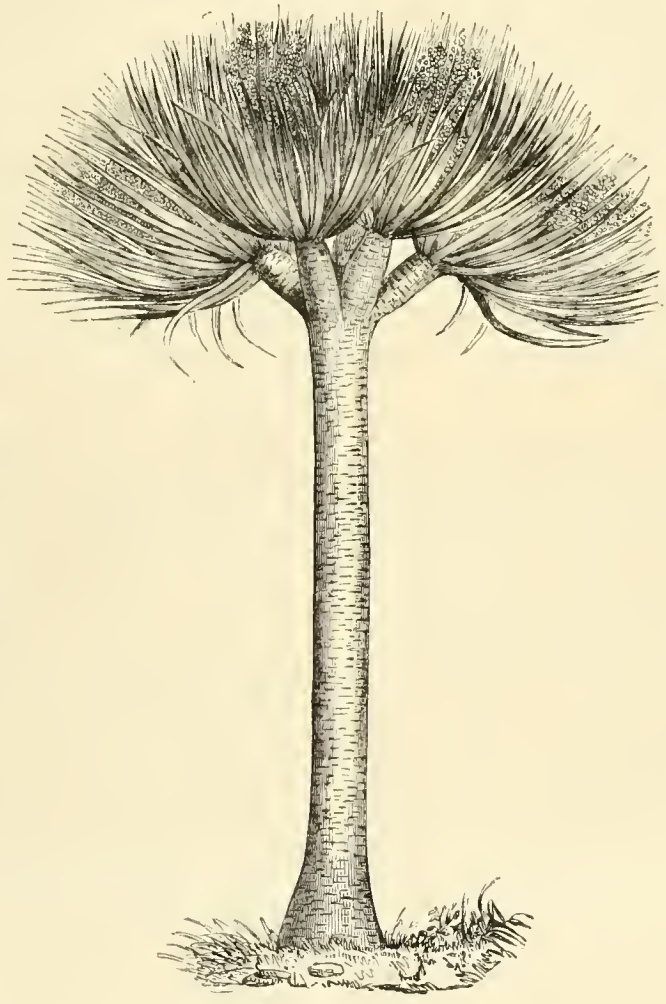


Fig. 111.—Dragon tree (Dracæna draco).

The fresh and bright plants we usually see do not at all suggest the size and aspect they attain in their native habitats. Dracæna draco, for instance, of which we grow attractive plants varying from 1 to 6 feet in height, is frequently found growing 30 to 40 feet in height; and it is on record that a specimen in the Canaries is 75 feet high, and 45 feet in circumference at the base. Although for general purposes young highly-coloured plants are the most serviceable for indoor decoration, older specimens which have approached the tree state have a distinct and imposing effect when agreeably disposed in suitable structures. Most of them require heat, especially those having variegated foliage, yet even these when approaching a state of—shall we say treedom?—are highly ornamental both in a glass structure and for occasional effect on the staircase or corridor.

But there are the hardier green-foliaged kinds which are valuable for conservatory effect, and for associating with flowering plants to form attractive groups for any decorative purpose. Some of these add a diversified feature to the sub-tropical garden in summer, and all are worthy of cultivation wherever convenience is afforded for this class of plants. Some which are adapted for cool treatment are D. (Cordyline) indivisa, D. lineata, D. australis, D. cannæfolia, &c. The beauty of these increases with age, and they afford an agreeable relief to collections of flowering plants, toning-down their colours and breaking-up their smoothness of surface.

Of the tropical and richly-coloured Dracænas we have a list which for intrinsic beauty with variety are unsurpassed by any other genus of stove plants. They are not frequently grown to a flowering state, the practice being to cut-down old and propagate young plants, as better fulfilling the purpose for which they are required; yet we have repeatedly seen the old species, as D. draco, D. terminalis, &c., in a flowering state, but they are more interesting than ornamental. D. Smithii, figured in the "Botanical Magazine" as having flowered at Kew and Sion House, has, however, double yellow flowers of undoubted beauty.

It is a little surprising, considering the time many of the species have been introduced, that more English hybrids have not been raised. The Messrs. Veitch have, however, led the way with a variety of great merit, a cross between D. magnifica and D. albicans. D. hybrida is a beautiful decorative plant, its deep rose and creamy white variegation being very telling. Hybrids are also raised by other firms, and there is no fear of experiencing a lack of novelties in this family of plants.

It is extremely difficult to make a choice of a few from the long list of beautiful Dracænas now offered. But notwithstanding the richness of the recent introductions, the old D. terminalis and D. Cooperi are still useful as ever. They are, however, less imposing than such kinds as Shepherdi, Youngii, Fraseri, regina, triumphans, splendens, imperialis, Hendersonii, Baptistii, and others equally fine, especially some of the latest introductions, which show their markings when in quite a small state. One of the most distinct of all, however, is D. Goldieana. It is quite unlike any other either in shape of leaf or colouring. In the generality of Dracænas the leaves are ensiform or lanceolate, and the variegation is longitudinal; in D. Goldieana the foliage is cordate, has a dark green ground, with regular diagonal bars of silver-grey. This should be grown in all collections.

The Dracænas are not only handsome plants, but they are of easy culture, high stove heat, copious supplies of water, and rich but open soil being the essential requirements. They are propagated by cuttings of the stems inserted in brisk heat, or by knobs which form on the roots around the sides of the pots. The last mode is certain in its results, and a stock is gradually increased without mutilating a specimen. If the work is carefully done these root-knobs may be severed from the plant without doing it any harm.

D. draco—Dragon's Tree, is so called from yielding a gum resembling the substance known as dragon's blood, which is extracted from the fruit of Calamus draco. D. terminalis is to the Polynesians a plant of great importance. The root is cooked and eaten by the natives, and also manufactured into beer and spirit. The leaves supply fodder for cattle, and afford coverings for roofs, and are also woven into cloaks by the natives. Hedges are formed by sticking its truncheons in the ground, where they readily take root and grow. In former times its leaves were the native emblem for peace, and, with

those of the Plantain, were a substitute for a flag of truce. It is, then, no small compliment to this plant that it combines with its beauty uses so important and beneficent.—W.

PLANTS FOR A GRAVE.

Equally with "F. B., *Blackheath*," do I detest seeing graves planted with gaudy flowers. There is something repugnant to the appropriate feelings of our nature to see the resting places of the dead attired in the colours of a clown's dress in a circus. Yet do I like to see the graves becomingly tended, and to this purpose I will thank you to allow me to lay before your readers a simple style of grave decoration now much practised in the North of England. It is much admired by strangers, and is becoming every day more general here.

Where the space allows the grave is made of the ordinary size inside the railings of the tomb, and is covered with soda from the seashore, the grass of which is very fine and of a beautiful green throughout the year. Around the outside are planted Snowdrops for winter, these are followed sometimes by Hyacinths, and for the summer a few Ferns are used. Thus, in the summer months, flowers are altogether discarded, and nothing but the Ferns are seen, and the effect is at once quiet and graceful. For an ordinary grave the sexton is requested to leave the mound a little less than the usual size, and the remainder of the space is occupied by Snowdrops and Ferns. In addition to the appropriateness and good taste of this style of grave decoration, it possesses the advantage of requiring the very least of attendance. Both the Snowdrops and the Ferns will last for many years, and all that is required is an occasional cutting of the grass on the mound, and the keeping the other parts free from weeds.—Beta.

SAVE THE SLOPS.

Let everyone who owns a garden, whether in town or country, bear in mind that the waste water, highly impregnated with ammonia and other valuable fertilisers, that annually goes to the gutter, would make many a man rich. Now that every well-arranged kitchen has a sink with a waste-water pipe attached, the latter should in every instance have its outlet in some portion of the vegetable garden. A tank, not necessarily large, should be the reservoir for receiving all the contents, and if no higher than the surface of the surrounding ground, and covered with a neat board floor, it will not prove unsightly. The centre of the garden is the proper place for its location, and a small force-pump will at all times enable us to use the liquid portion of the contents. The sediment, which will mostly settle to the bottom, should be taken out as often as it interferes with the working of the pump, and immediately composted as an incomparable manure for Vines. After a reasonable length of time it becomes as mellow and rich as anyone could desire, and causes the richest tint of green to spread over the Melon and Cucumber leaves. Indeed, for Lima Beans there is no fertiliser so well adapted as this. The liquid portion of the contents of the tank may be pumped up, and by the aid of inexpensive wooden troughs can be conveyed to any portion of the garden where it is needed. The Celery, treated to an occasional dressing of this, will outgrow any plants ever seen in the garden.

In early spring, however, is the season when its virtues are most needed. A sprinkling over the seed beds of Cabbage, Celery, &c., will prove equal to the best "home-made" liquid manure. The overflow pipe (for there must be such an arrangement) should lead into a neatly-kept gutter, and on either side of this, if one or two rows of Strawberry plants should be set, there will be an astonishing growth of foliage followed by a surprising crop of fruit.

The best arrangement of this kind is where there are two tanks, connected near the top by a short pipe. The waste water, sediment and all, runs into the first of these, when the solid portion sinks to the bottom, while the liquid fills the tank, and, passing through the communicating pipe, is held by the second tank. Over the latter should be fastened the pump for the convenience of using the stimulating fluid; but in the first tank will accumulate all the solid matter, which may remain therein for some time, or until it should fill the vessel and retard the passage of the water in the communicating pipe. As this contrivance has been successfully tested by some of the most practical gardeners of my acquaintance, it should come into more general use, as the idea of a person purchasing several dollars' worth of manure for his garden when he has an almost inexhaustible supply without cost at his very door, is simply ridiculous.—(*American Tribune*)

NOTES AND GLEANINGS.

On the site of the ancient castle of Benefield in Northamptonshire there is a handsome old Ash tree, the branches of which droop in the same manner as those of the Babylonian Weeping Willow and of the Scampston Elm. It is a very graceful and ornamental tree.

—— In the garden of Mr. J. Smith, the Rectory at Oundle, is a polygamous Mulberry bearing an abundance of male and female catkins. This is an unusual occurrence, as the Mulberry generally met with in gardens produces female flowers only.

—— In the conservatory of Mrs. Webb, West Side, Clapham Common, is a fine specimen of the Eugenia Ugni. The plant forms a close green column about 4 feet in diameter and nearly 30 feet high. The stem is fully 30 inches in circumference at the base. This fine plant is very ornamental, its glossy foliage being enlivened by white flowers and fruit in different stages of ripeness. The fruit, of which Mr. Pithers the gardener has picked considerable quantities, is about the size of an oblong Gooseberry. It possesses a peculiar piquant flavour agreeable to some palates.

Smith's Improved Metallic Garden Labels.—These are painted a light ground colour, and the names in raised metallic letters are black. They are very superior labels, but care must be taken to have the names correct. One sent to us is "Cupressus Lawsoni" instead of Lawsoniana.

NOTES on VILLA and SUBURBAN GARDENING.

KITCHEN GARDEN.

In this locality dry weather has prevailed for so long that many crops, where water could not be applied, have shown signs of languishing. Within the last week, however, plentiful showers have fallen, and greatly improved the aspect of plants in general. The rain has been especially welcome in those little spots occupied by amateurs' gardens, where little or no shade is produced by surrounding vegetation. It is in such places where crops have suffered most, and where work has been delayed either in sowing or planting on account of the dry state of the soil. In any neighbourhood where such a state of things has existed, and rain has fallen, there must be no delay in putting out all kinds of plants, such as the main crop of Brussels Sprouts, for if these are not planted-out early enough to make a vigorous growth before autumn the produce is likely to be short and the sprouts very small. This vegetable is a profitable one for an amateur, and worth growing well. The plants should be planted 2½ feet each way, and in rich soil they will grow to a large size.

All sorts of Broccoli too, where the plants are of a proper size, should be planted-out during showery weather, and they are assisted to make a natural start, such as they cannot have in very hot dry weather. Spring-sown Cabbages also must not be neglected. Some people depend upon the spring bed for a supply, but my experience is that towards autumn they are tough and not of such a nice flavour as those which are grown quick and cut in a young state. Plant-out a full crop of the Drumhead and Dwarf Green Savoys; these may be planted 2 feet each way. While on these I may say that a sowing ought to be made of Wheeler's Cocoa Nut or Little Pixie Cabbage, and the Rosette Colewort for early autumn Cabbages; they are quick-hearting kinds, and may be planted closely together. Plant many of the winter and spring greens, I mean Tall and Dwarf Curled Kale, Scotch Cabbaging and Cottagers' Kale, and Dalmahoy Sprouts, leaving the coarser sorts to follow later on as ground falls vacant. Plant-out a full crop of Cauliflowers now. There is none better or more select than Veitch's Autumn Giant, and those from seed sown the latter end of last month may be put out as soon as ready.

Make a good sowing of Peas, such as British Queen or Ne Plus Ultra. I usually make another sowing of some one or other of the early sorts in the first week in July; these have at times cropped fairly, and have been exceedingly useful. Sow also dwarf green Gem Beans for autumn use where they are in request, and another crop of Dwarf Kidney Beans, as well as the last crop of Scarlet Runners. These later sowings are sometimes the best in this vegetable, as they do not grow so high, and are in full bearing till frost destroys them, while the early crops are exhausted.

Plant Celery in the trenches as soon as possible. I generally plant two rows in a trench 18 inches wide, putting the plants 1 foot apart in the row. I believe for Celery to keep during

winter it must not be grown too large, but a medium-sized plant is the best for all purposes. When once planted-out the plants must never suffer from the want of water, and they will be crisp and of good flavour. Some advocate shading the plants, but I do not do that if I can manage to take up my plants with plenty of soil to the roots, and plant them before they are become overgrown for the purpose. There is a proper time for this work, and an effort should be made to have it done at the time.

In a showery time like the present the opportunity should not be lost to sow a good breadth of Orange Jelly Turnip, or any other favourite sort. The plants come up quickly, and grow away from the reach of the flea, which in dry weather will eat the little plants up. With me early Turnips have done well. I am pulling the Early Stone and White Dutch, both of which I consider have escaped the flea by the free use of wood ashes and soot, and they have been excited in growth in consequence. They have also been supplied with an abundance of water.

Plant Leeks at once, either in trenches or on a border of rich soil; the former plan is the way for them to grow firm and quick. Thin-out the crops of Beetroot if it has not been done, and fill up vacancies by pricking-out some of the plants not wanted otherwise. Those who grow Endive may now make a small sowing of Digswell Prize or Green Curled, and later on, in addition, the Broad-leaved Batavian and Moss Curled; the latter sort is very tender and useful, and so compact as to almost blanch of itself, but it is not so hardy as the other sorts, and will not stand the winter well.

Sow also two or three different sorts of Lettuces, to be planted-out thickly for use in July, August, and September, and another sowing in the first week in July; the sorts may be All the Year Round, White Cos, and Lawe's Black-seeded Bath Cos; the latter sort is a thorough good autumn Lettuce—hearting like a Cabbage.

Among the general work to be done is to keep the hoe plying between all growing crops, and stake early all those plants that stand in need of support. Leave off cutting Asparagus, and keep the beds clean during the summer. Attend to the training of Tomatoes on walls, and water them well. Give a mulching or top-dressing to them and all other plants situated in hot places, and water very plentifully everything that stands in need of it. Vegetable Marrows and outdoor Cucumbers keep pegged-down and trained; stop some of the principal shoots to incline them to throw out bearing shoots. Radishes must now be sown in moist shady places, or they will be hard and stringy.—THOMAS RECORD.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

HARDY FRUIT GARDEN.

As soon as possible we shall attend to the bush and pyramid trees. The shoots must now be stopped, and when necessary thinned out. No fruit trees will give satisfaction if they are not attended to in summer. Bush, pyramid, and cordon-trained trees are not out of place in any garden, but they are specially adapted for amateurs who are the owners of small gardens, and who like to do much of the light work themselves. In rich light soils the trees have a tendency to produce much unfruitful wood, and the frequent stoppings sometimes instead of causing fruitful growths, merely produce a thicket of young wood; of course this is when the trees are young. The certain remedy is root-pruning in autumn, but even in summer much may be done by a judicious thinning-out of the growth. No good fruit will be produced if the trees are a thicket of wood, for sun and a free circulation of air is essential to produce both quality and flavour. A few words of explanation is perhaps necessary for those who are as yet but beginners in the art of summer pinching.

The largest proportion of young wood is produced at the ends of the branches. A shoot of last year's growth which has been cut back will start one strong growth from the end, and also a number of side growths. These last must be pinched or cut back to a leaf or two, and the leading growth to six or seven leaves. If it is desirable to increase the size of the tree the young growths must be allowed to develope themselves more; even side growths are necessary, and must not only be allowed to remain where they are required, but also be stopped at the right bud. If the growth is required outside the tree, stop at an outside bud, and *vice versâ* if the tree is not sufficiently furnished internally.

Cordons are very easily trained: the leading shoot must be trained along the wire without stopping it, and all side growths cut back to a leaf or two. A few varieties of fruit trees produce long straggling growths partially bare of buds. Where this is the case the leading growths may be stopped once or twice during the growing season, each time when the young shoot has made six or seven leaves. It will be a good opportunity when summer-pinching the trees to remove all fruit attacked by the Apple borer. A small hole may be observed in the side of the fruit, or after careful inspection concealed in the covering of the eye. The best way is to burn the fruit at once.

Peaches and Nectarines on walls ought now to receive a final thinning. There is abundance of fruit this year, and it is a great mistake to overcrop. The shoots must also be trained into the positions they are to occupy, and a sufficient number be retained to fill up all vacant spaces. We do not usually stop the young growths on wall trees, but if a strong shoot could be trained where there is room for two or three, stopping this would cause the requisite number to start, but very weak growths might not start at all. If any branches have died off it is highly necessary to fill up the vacant space by undoing the adjoining branches from the wall and training them in its place.

It is absolutely necessary to protect Cherries and Strawberries from the attacks of birds; indeed, it is scarcely possible to secure any Cherries for the owners' use without nets. The best plan which, though attended with considerable expense at first, is to form an enclosure round the trees; they require to be planted together when this is done, the sides of the enclosure as high as the trees may be of wire netting quarter-inch mesh, and over the top ordinary netting may be used. Small fruitful trees may be protected with netting thrown over them. Wall trees are easily protected. The netting is nailed along the top and bottom of the wall, and kept from the trees by sticks a foot long with forks at the end; these stand out from the wall, and the forked end holds back the netting.

ORCHARD HOUSE.

The fruit has now been thinned out, and all the trees are carrying good crops of fruit. We were very much annoyed with aphis, and the trees just at the time the fruit was setting suffered from it, but fumigation has been resorted to, and the trees are now clean. They have also been surface-dressed. When commencing the culture of fruit trees in pots we were very careful to use the mixture recommended by Mr. Rivers—viz., malt or kiln dust, road scrapings and manure, but the kiln refuse has not been readily obtained, and a mixture of stable manure and loam has taken its place; the manure and loam in equal proportions are thrown together in a heap, which soon heats violently, and after being turned over daily for ten days or more until the heat declines it is ready for use. This mixture is spread thinly over the surface of the pots, a fresh dressing being applied every ten days until the fruit shows signs of having finished stoning. The copious supplies of water wash the rich dressing down to the roots, and a mass of young rootlets work up into the dressing. We syringe twice a-day—early in the morning, and when the house is shut up in the afternoon.

VINERIES.

The early houses are being rapidly cleared of the fruit, and this makes an opportunity to syringe the leaves to free them from red spider. In previous seasons sulphur was applied to the pipes, and this insidious pest at least kept in check. In two early houses the sulphur was not used, but in the third, which was attacked almost as soon as the fruit was set, the spider increased so rapidly that it was feared the crop would not ripen before the leaves were destroyed. The enemy had first taken up a strong position in a Royal Ascot Vine, always the first to be attacked, and from this vantage ground it had spread from end to end of the house; now here was an excellent opportunity to show whether the sulphur would destroy the pest or not.

The pipes were heated as hot as was thought to be consistent with safety, and all of them were coated with the flowers of sulphur dissolved in soapy water to the thickness of thin paint. Next morning the leaves were examined, and the spider to all appearance had not suffered. At night another coating was applied, and the pipes made still hotter; on the following morning some of the spider had suffered, but many were alive. Again the dose was repeated, and the pipes heated until a thin haze could be discerned in the atmosphere; this was the signal to damp down the fires, as just a trifle more might be too much for the Vines. We examined the leaves next morning very confident as to the result, not with the naked eye but through a magnifier, and there they were hanging to the under sides of the leaves in hundreds, not one alive! and at the same time not a leaf nor berry injured (the berries had finished stoning). What say Mr. Pearson and other good Grape-growers, who say that sulphur will not kill red spider, to this experiment? It is only right to say that this is a very hazardous practice, and that sulphur often causes rust on the fruit.

If there are any shanked berries they ought to be carefully cut out with the scissors, as they are an eyesore. Try to keep dust from the berries, even if it is necessary to frequently water the ground outside the house. If any sweeping is required inside the house a little water should be sprinkled about to prevent the dust. If all the fruit has been cut—(and this is where the market gardener has an advantage over the private grower, as the one cuts all his fruit as soon as it is ripe, and the other must allow it to hang for two months or more)—the leaves should be well washed with the garden engine and the border watered.

Late houses require considerable attention as to airing, watering, and keeping up the required amount of moisture in the

atmosphere. Stopping the growths must also be done in time, for it is positively injurious to the Vines to allow the laterals to extend themselves, and then to cut them out in armfuls or even barrowloads. The balance between the roots and branches must be evenly maintained.

GREENHOUSE AND CONSERVATORY.

The stage Pelargoniums will soon be over, and their places will be well supplied with Fuchsias that have been grown-on out of doors for some time and kept from flowering by being stopped. The Fuchsia may be brought into flower at any time, and is a highly decorative plant. Greenhouse plants are now being placed in positions out of doors, those exposed to the sun have a tile laid against the pot, as the heat is thus prevented from injuring the roots. Many plants require repotting, and will be attended to as soon as possible. Placing Chrysanthemums in their flowering pots. Those intended for specimen plants have been repotted three or four weeks ago. The plants for cut blooms are potted two and three plants in a pot; the largest pots used are 13 inches, and the smallest 8½ inches in diameter, inside measure.

FLOWER GARDEN.

The bedding plants had shown signs of distress from the continued drought, and we had to water them; fortunately rain came, yet the watering was of much benefit. Pinks are just coming into flower, and are very fine; the lacing has come out well. The difference between autumn and spring plants can be seen in the imperfect lacing of the latter. Phloxes have been frequently watered; they suffer sooner than any other plants. Carnations and Picotees are doing well, though they were not improved by exposure to the recent drying winds. During hot dry weather syringing twice every day is beneficial to them.—J. Douglas.

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

York.—June 16th, 17th, and 18th. Mr. Jno. Wilson, 13, New Street, York, Sec.

Exeter (Rose Show).—June 18th. Mr. T. W. Gray, Queen Street Chambers, Hon.-Sec.

Fareham.—June 23rd. Mr. H. Smith, Sec.

Stowmarket.—June 24th and 25th. Mr. S. Prentice, Hon.-Sec.

Crystal Palace Company.—Rose Show, June 26th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.

Reigate (Rose).—June 26th. Bushby Brittee, Esq., Hon.-Sec.

Wisbeach.—June 30th. Mr. C. Parker, Hon.-Sec.

Maidstone.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon. Sec., Rose Club, Mill Street, Maidstone.

Norfolk and Norwich Horticultural Society.—Rose Show, June 30th. E. A. Field, Hon.-Sec.

Birmingham.—July 1st, 2nd, 3rd, and 5th. Mr. Quilter, Aston Park Sec.

Spalding.—July 1st and 2nd. Mr. G. F. Barrell, Hon.-Sec.

Baockham Rose Show.—July 3rd. Rev. Alan Cheales and Charles Mortimer, Esq., Hon.-Secs.

Southgate.—July 3rd. John Miles, Esq., Hon.-Sec., Southgate, N.

Grantham.—July 6th and 7th. Schedules, &c., from Mr. Lyne, Bookseller.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Books (*H. E. M.*).—The new edition of "The Greenhouse, its Plants and their Management," free by post for ten postage stamps.

Select Strawberries (*J. C. P.*).—*Early*—Vicomtesse Héricart de Thury and Keen's Seedling. *Main Crop*—President, Sir Joseph Paxton, British Queen, and Elton.

Picea pinsapo's Leader (*Kittie*).—The leader of a Conifer may be restored by grafting on the stump remaining the leader of a side branch; or one of the uppermost side branches may be turned by degrees to a perpendicular position by training it to a rod fastened firmly to the main stem.

Royal Horticultural Society's Show.—Mr. Dixon, Norwood Nursery, Beverley, was second prizetaker for one of Mr. Bull's cups.

Disease of Peach Leaves (*Mrs. Carlisle*).—It is a well-known disease called "Peach blister." In this instance it is accompanied by a fungus named Ascomyces deformans, but the fungus is said by some observers to be not always present. We are of opinion that the blistering is caused by spring frosts rupturing the sap vessels, and that the fungus lives on the extravasated sap.

Gold Fish in Greenhouse Tank.—Gold fish will live in the tank, but you must have some aquatic plants growing in it, and the bottom covered with sand and fine gravel mixed.

Lily (*C. A B.*).—It is only a variety of the Martagon Lily, but the Editors do not remember seeing before one of the same colour.

Dahlia Shows Suspended.—"In what year was it that there was no Dahlia show held? and was it in consequence of the Dahlias in that year being so fearfully infested with thrips?—A., *Coventry*." We shall be obliged by any of our readers sending us a reply.

Window Boxes (*W. W.*).—The best plants are such as are usually employed for bedding-out, having a few of each of the following Zonal Pelargoniums—Iantha, crimson; Master Christine, pink; Vesuvius, scarlet; The Bride, white. Golden Tricolor—Lady Cullum. Bronze—Black Prince and Prince Arthur. Silver-leaved—Bright Star and Prince Silverwings. Double-flowered—Aurora. Centaurea candidissima, silvery foliage. Fuchsias—Sunray and Delight. Calceolarias—Aurea floribunda and Sparkler. Verbenas—Eclipse, crimson scarlet; Clarinda, purple, white eye; La Grande Boule de Neige, white; Melindres splendens, scarlet. Lobelia speciosa and Blue King. Ivy-leaved Pelargonium—Silver Gem and Dolly Varden. Sweet-scented-leaved Pelargoniums—Pheasant's-foot and Lady Plymouth. The Verbenas, Lobelia, and Ivy-leaved Pelargoniums should occupy the margin, and the middle be filled with the others. The variegated Thyme is also good for the margin, especially the variety Thymus citriodorus aurea, also Gazania splendens fol. var., and Alyssum variegatum. We have, no doubt, named too many for your purpose, but you may select from them to meet your requirements. A Clematis would not flower to meet your wishes this year, but if you want something to run up the sides of windows, Lophospermum Hendersonii and Maurandya Barclayana, and its white variety alba, are neat and would answer; so also would the Canary plant, Tropæolum canariense.

Roses for an East Aspect (*Flora*).—Hybrid Perpetuals will be the most likely to succeed, selecting those which are of vigorous growth, a few of which are—Abbé Bramerel, Alfred Colomb, Annie Laxton, Auguste Neumann, Auguste Rigotard, Baroune de Rothschild, Baroone Louise Urkull, Capitaine Lamure, Charles Turner, Comte Raimbaud, Comtesse d'Oxford, Duke of Edinburgh, Edward Morren, General Miloradovitsch, Jean Cherpin, John Hopper, Jules Margottin, Leopold II, Louisa Wood, Louis Van Houtte, Madame Canrobert, Madame Hippolyte Jamain, Madame Laurent, Madame Victor Verdier, Mdlle. Eugénie Verdier, Paul Neron, Perle des Blanches, President Willermoz, Princess Beatrice, Reine des Blanches, Senateur Vaisse, Souvenir de Julie Gonod, Susanna Wood, Thomas Methveo, Victor Verdier, and Xavier Olibo. They require very liberal treatment, and should be watered abundantly overhead in dry weather.

Irises and Liliums for Wet Ground (*Idem*).—Irises that would probably succeed are I. De Berghi, I. germanica many varieties, I. Kæmpferi, and vars. Alexander Von Humboldt, Duchesse de Belcourt, Humboldti, and Le Souvenir, Kæmpferi and its varieties doing best in sandy peat soil, I. fœtidissima variegata having fine white-striped foliage. Of Liliums we can only advise one—viz., L. superbum.

Melon Stems Cankering (*W. B.*).—The canker at the stem and roots immediately near the stem is caused by a superabundant supply of moisture after the stem has been for a time dry, and not unfrequently is caused by the stem being covered with leaves; or drip from the lights falling on the stem will cause it. The only remedy we know is to remove the leaves which cover the stem, and not water over the stem, but keep a clear space of about 6 inches from the stem all around, and if any canker appear upon the stem rub it dry with quicklime, and dust it over with it after the operation. Examine the plants frequently, say two or three times a-week, and if any canker continue rub it dry with fresh lime, dusting again as before, and by continuing it the best results may follow; it may be overcome, or at least the plants continued until the fruit is ripe. See that there is no drip upon the stems from the lights; we do not see the necessity for Melons in your case being sprinkled overhead daily. The atmosphere is too moist for plants in the state yours are, and we should either discontinue it, watering two or three times a-week, as the state of the weather shall determine, and a little air at night will do much to keep down the canker by allowing any excess of moisture to escape. The Lycopodium we presume you wish to have named is Selaginella cæsia.

Fernery Watered with Corrosive Sublimate (*E. B., Halifax*).—It is very likely the roots as well as the fronds will be destroyed, but we should give the plants or rather the soil a thorough watering with rain water, and await the result. If they do not shortly recommence growth, your only remedy will be to remove the plants and soil, and replant.

Peas and Cucumbers for Mid-September (*W. Dumbell*).—Your Peas should be sown at once, and unless of an early kind they will not be in at the time you require, as the early kinds require about thirteen, and the late kinds fourteen to sixteen weeks from sowing to having pods fit to gather. The Cucumbers should be sown about the middle of July, and planted-out the second week in August.

Peach Trees not Fruiting (*W. M. Grote*).—The soil in which your trees have been planted is too rich; it has caused them to make vigorous growth, which is never fruitful. If you partially lift the trees in the autumn and place some fresh loam round the roots it may check the growth for next season and cause the trees to make weaker, and consequently productive wood. The trees planted against the back walls of vineries will be shaded too much.

American Aloe Flowering (*James Haney*).—The spike will grow 12 or 15 feet high, and may be protected from sun and wind in some way. If the plant can be removed to a cool greenhouse, and be shaded from the sun, that would be the best way to preserve it in good condition.

Vine Roots (*James Bell*).—They are quite healthy. The white portion is merely the woody fibre exposed by the bark splitting, owing to its growth not keeping pace with that of the wood.

Fuchsias (*F. O. M.*).—For a pillar in the conservatory, Lustre. For planting-out Riccartoni is one of the best hardy Fuchsias. Sunray and Pillar of Gold are attractive by their foliage. The following varieties flower freely in the open air:—*Lights*: Rose of Castille, Wiltshire Lass, Conspicua, Alba Coccinea, Marginata, and Evening Star. *Darks*: Try Me O, Constellation, Lizzie Hexham, Norfolk Giant, Rifleman, and King of the Doubles.

Black Hamburgh Vine (*Fidget*).—At Winchester a Black Hamburgh Vine bears well in a garden on a wall facing the south and sheltered from cold winds.

Azaleas (*Clifton*).—Keep your plants in the vinery to make their growth, and until the flowers are formed in the tips of the shoots. This is easily determined by the fingers. At any rate do not turn out the plants until the Grapes are approaching ripeness, and not necessarily then providing the fruit colours and finishes well. If thrips are on the Vines and plants fumigate on two or three successive nights. Syringe the plants heavily twice a-day, and once a-week with warm soft-soap water of a strength of 2 ozs. to each gallon of water. This will keep your plants clean, and the moist atmosphere will be precisely suitable for the Vines until the fruit begins to colour; water must then be discontinued, and the Grapes and wood of the Azaleas will ripen at the same time. The plants may then be placed in the open air.

Vine Leaves (*G. A. B., Louth*).—There is nothing objectionable in the

state of the Vine leaves. The Vines are very vigorous, and the roots supply sap to the leaves faster than they can elaborate it, so the vessels are unnaturally expanded.

INSECTS (*A Subscriber*).—The insect you have sent, supposing it to be a drone (male) wasp, caught flying about with queen wasps, is a solitary insect belonging to a different sub-family. It is named Bynerus parietinus, and builds its nest in old walls and sand banks.—I. O. W.

NAMES OF PLANTS (*Madeira*).—We cannot name from flowerless specimens, or mere scraps of Conifers. (*F. B.*).—We cannot name from leaves only, nor florists' varieties even from flowers. Your Begonia leaves are from such varieties. (*J. Lansdell*).—We believe it to be Clitorea ternatea, Wing-leaved Clitoria. A portrait of this plant is in the "Botanical Mazagine," *t.* 1542.

POULTRY, BEE, AND PIGEON CHRONICLE.

GRIEVANCES AND CORRESPONDENCE.

AMONG all the different hobbies taken up in the present day, we doubt if there is ever as much dissatisfaction in any of them as there exists at times in the poultry fancy. So many are dissatisfied, and grumble because they think their own burden is the heaviest, or that their troubles are the most intolerable. Perhaps this may not only be the case in our department. Anyhow we know among many poultry-loving individuals dissatisfaction frequently reigns supreme. Let us take a monthly or a quarterly number of our Journal, or that of any other poultry contemporary, and we are able to pick out grievances on every conceivable subject—eggs, prizes, birds sold and birds bought, shows, *et id genus omne*.

We fear individuals who delight so in grievances gain but sorry comfort and poor consolation from their friends, and still less from the fancy. The former call them idiots for embarking on the road at all, and the latter think them equally foolish for either not taking greater care of number one, or else treat their pitiable effusions as rubbish. We are not hard-hearted, and we have had as much to put up with, we believe, as anyone, but we do wonder why people do complain so much. Is it that they wish to be pitied for the troubles and calamities they undergo? Do they love to parade their misfortunes before this unsympathising world to show how nobly they bear them? Do they think they will be the means, by circulating their troubles, of bringing about better times? Or do they complain for the very love of grumbling? We sometimes are almost obliged to believe the latter is the real state of the case.

We must not be misunderstood when we speak of grievances, for we do not mean that fanciers should not show up and do their utmost to stop wrong practices, for we can thoroughly sympathise with those who have had their birds tampered with or purposely rendered unfit to win, and we hope when a case of any such kind can be clearly proved nothing will prevent the circumstances being fully presented to the public. It is not to that kind of grievance we would refer, but to stupidly concocted woes proceeding from fertile imaginations. These are the grievances we object to, and would beg those who make them to consider first the incalculable trouble they put their correspondents to, and secondly the absurdity of the very grievances themselves, and consequently the ignorance that is exhibited by those who do complain. We were calling the other day on a lady who had just entered the poultry arena, and who, having made her *début* in exhibiting, was not as satisfied with the results as she had fondly hoped to have been. One thought, consequently, a letter on the subject, not for insertion, but a private kind of sermon, might do the editor of a poultry paper some good. Well, a letter was penned, and this was the substance of it.

"Mrs. A regrets very much having to trouble the editor, but she feels sure he cannot know that her beautiful Light Brahma cock did not win the prize at C. Mrs. A was very much disappointed, and does not pretend to hide it, for she had given 30*s.* for the cock without basket or carriage, and understood the bird was to be a winner. Mrs. A herself tied-down the basket, and can vouch for the cock being in perfect health. Certainly the cock's comb was damaged in fighting, and he had rubbed most of his leg feathering off. There were also bare patches on his back, but these were only in consequence of the hens having eaten his feathers; still Mrs. A believed the judge would have given her bird the prize, for he must have been able to see the points of her beautiful bird. Mrs. A leaves the matter happily in the hands of the editor, feeling sure he will find out the true state of the case, and see that her birds have justice done to them in future."

This was the letter we just prevented being dispatched, and we believe it to be a type of many dozens with which editors and managers are weekly assailed. As we told the lady, surely if she only thought the matter over she could see that the editor of a paper could do her no good. How could he see her birds had justice done to them? How could he make the judge perceive the perhaps non-existing points? Private people, however, come in for their share of grumbling letters, and that no small one. Here is a ridiculous case. A friend of ours, a gentleman well known in the fancy as a successful exhibitor, sent a dozen Dorking eggs off to a party who had ordered them. Within three days after they had been sent off (we are not certain it was not within two), back came the basket of eggs, and a letter which said that the eggs arrived and being tested were found to be all clear, and so another sitting at once would oblige. This we call the most original impropriety we ever heard of, for allowing the time to have been three days, one-half of the seventy-two hours to have been consumed in the transit of the eggs, this genius in the remaining thirty-six hours had, we supposed, placed the eggs under the hen, taken them away again, tested them, found them to be clear, and again sent them on their journey.

Many are the letters, too, egg-sellers receive, telling of dire disappointments because only six or seven out of the sitting of eggs have hatched, or because the chickens died in the shells, or were "rotten," not "clear." We must answer the letters, and we must enter into their difficulties to a certain extent, but we do hope we may soon find that people are more reasonable, and cease to entail such immense trouble upon a body of fanciers who in many instances are people that take up poultry as a recreation and as an amusement after business hours, and who, if by selling birds and eggs try to make the two ends in the poultry establishment meet, have no time to reply to needless correspondence.

Secretaries of shows come in for a large share of troublesome letters. We have a pile by us of epistles sent to one of the authorities of a large show held last year. We pick out two of the simplest, for some of them are really difficult to understand, so wonderful are their expectations:—"Sir, I usually am happy to remain at the stake, a martyr to the glorious cause of poultry; but here I must say a word. Such mismanagement should be sent forth to the world, and I give you timely notice, unless I hear by telegram why my birds did not reach home by the mid-day train on Friday instead of the morning of Saturday, I shall write to the Editor of the *Journal of Horticulture* and beg him to publish the case." The telegram was not sent, but the matter ended with the above. This is the second one:—"Sir, where is my catalogue? I sent you a penny for postage! and let me hear by return whether you gave my birds the bread and milk at 6 P.M. as per injunctions; also kindly let me hear if Mr. A's Hamburgh cock was the one with the long tail, or the one with the malformed comb. I should like to hear the weight of the prize Rouen Ducks, not both of them, only the drakes; and do you know if the pen was claimed in the sale class? If not, please forward on the enclosed to the owner to save a post; if, however, it was, I should be glad to have my enclosure back, and a card stating name of purchaser and his address. Do not forget the catalogue and weight of the drakes. P.S.—Do not forget the catalogue, mind, and to see about pen ——, it must be that pen."

This is the correspondence secretaries have to endure. Do let us all try not to trouble secretaries and members of committees more than we can help, for they are generally men who do their work for the love of the fancy, and who have to put up in most cases with loss of money as well as loss of time. Above all, let us hope for a cessation in the style of correspondence of which we have been speaking.—W.

SCHEDULES OF SHOWS.

PETERBOROUGH holds its poultry show on June 29th and 30th. Entries close on Saturday next, June 19th. Lady Huntly, and her daughter Lady Grace Gordon, are great patronesses of this Exhibition, and supply more than a quarter of the prize money. The prizes are small and classes few. There are two classes for 1875 chickens and two for table poultry, and an extra prize of £1 for the best pen in the Show. The entry fees are low: for non-members only 2*s.*, for others 1*s.* each pen, and the modest charge of 6*d.* for Pigeons. Surely here is a chance for the cottagers.

BUCKINGHAM holds its second Show on July 27th. Entries close on July 13th. It is a very fair schedule, with three prizes in each class. The breeds are fairly well classified, and there are several classes for single cocks, which we should think would fill well, for many have them in good feather, and no hens fit to go with them at this season. The peculiarities of the schedule are a class for spring chickens and two classes for Geese. There are also especial classes for cottagers, of which we are very glad, and we also rejoice to see "several pens of poultry may be sent in one package." The Judge's name, whose decision is to be final, is not declared. Why not? Let it be advertised; it will increase the entries if a good man has been chosen.

CIRENCESTER holds its third Exhibition on July 28th, 29th, and 30th, under a new secretary. Three days for such a show is a most objectionable long time. Entries close on July 14th, and the fees are 4*s.* and 3*s.* for poultry, and 2*s.* for Pigeons. There are two cups for the two best pens of poultry, and a gold medal for the best pen of Ducks. The classes are fairly well

distributed, Hamburghs coming off the best. Pigeons have a point cup, but as there are only nine classes, and the prizes but 10s. and 5s., we do not anticipate much rivalry between the "dealers." So here is a chance really for the badly-treated amateur. We are glad to see more than one pen may come in a basket. The Judge is not announced; we conclude he will be one of "acknowledged ability," and earnestly hope exhibitors will not be disappointed.

Shrewsbury will hold its Show on July 29th and 30th. The names of the Committee and that of the Hon. Secretary are well known, and consequently we shall expect a superior exhibition. The prizes are good, and extra cups numerous; £2, £1, 10s. in each class. Dorkings and Cochins are well divided, and so are the Game. Brahmas, Dark and Light, each have a class, and an extra. Hamburghs have three classes, and Mr. Darby gives them an extra cup. Crêves, Houdans, and Malays each have classes. Mr. Brooke and Mr. Tudman evidently have come to a mutual understanding, the one giving his cup for the other's specialities. We regret very much to see no Poland class in this capital schedule. It is a mistake. Game Bantams all compete together, but there is an extra between them and the Variety Bantam class. No class for Black East Indians. Pigeons have ten classes, but it is not a schedule which will draw; hardly inviting enough to get the Doo Lodge birds down. The Judges are announced—viz., Messrs. Hewitt and Esquilant. We sincerely hope the former will be able to attend. Entries close on the 6th. The entrance fees are most moderate—only 4s. and 2s. This Show deserves patronage. The birds must come in separate packages. We are sorry for this; but still it is at shows where there are single-bird classes that we do so earnestly beg for permission to use double baskets.—W.

THE PRESENT YEAR'S HATCHING SEASON.

Having seen much correspondence and many complaints of the hatching season this spring, especially during the east winds in March and April, I venture, though only an amateur with no extraordinary appliances, to send a record of my experiences. December 8th, 1874, till February 15th, 1875, set 76, hatched 32; March 4th till April 30th, set 161, hatched 123. The pure Dorkings and pure Houdans hatched equally as well as the cross-bred chickens.

The birds for breeding live in slight moveable wooden houses, and have free range; but I am anxious to record my experience of the effect of frost on eggs rather than east wind. I set thirty-six eggs before January 15th, and only hatched out seven, and this I attribute entirely to the eggs having been chilled before they were collected. I shall be glad of the opinions of the poultry connoisseurs as to the necessary minimum temperature in which eggs for hatching should be kept. My experience teaches me they should be collected while warm during severe frosts, and kept in air-proof boxes on the Norwegian stove principle.—A Berkshire Amateur.

[We think our correspondent's suggestion well worthy of attention, and invite our readers to send us their observations.—Eds.]

SELECTION.—No. 1.

I would have entered upon this subject long ere now had not circumstances combined to prevent me. However, on reading Dr. Morgan's paper reprinted in our Journal from the "Pet-Stock Bulletin" I felt it touched a point upon which I am very susceptible. It is neither my desire nor intention to open up an argument, but I shall be glad to see expressed opinions from those who have studied this subject. Dr. Morgan is no doubt a fancier of the first rank, and I wish we had one or two more of his calibre on this side the Atlantic, but I fear his enthusiasm has carried him into those scientific mists through which we can see neither head nor tail. He has launched upon a sea of which he skims the surface only—a sea of depth so infinite that I believe man will never be able to fathom it.

Dr. Morgan starts with the conviction that all our beautiful varieties of Pigeons have sprung from the common Pigeon. I presume he means the dovecote Pigeon. Scientific writers name the small Blue Rock Pigeon as the parent of all: this latter point I shall take up by-and-by. The most unsatisfactory part of the doctor's paper I think is, that all the varieties bred "from the common Pigeon is a simple fact in nature, depending upon selection extended over a period of time." Upon this so called fact the doctor has, he says, satisfied himself, but he has neither satisfied me, nor, if I mistake not, any of our readers. This is just the old, old story, "Once upon a time long, long ago," &c., which does satisfy the child but will not satisfy the man.

The doctor says, "Pouters become smaller and smaller when allowed to intermingle, Carriers lose their wattles and size, Fantails drop their tails, and Tumblers become coarse." By the word "intermingle" am I to understand to cross with each other in those or other varieties? If so, then of course cross-bred birds will be produced, some of them showing more of the characteristics of the father, and others more of those of the mother. This would not be the natural selection of Mr. Darwin nor the artificial selection of the fancier, but compulsory selection. Should the word "intermingle" mean matching as they choose in their own variety, the tendency would be to make the Pouter coarser; but if "smaller and smaller," they would still be Pouters. Carriers may lose the wattle so far and deteriorate in size, still they would be Carriers. Fantails would lose in size of tail, but they would still bear upon their shape and style their original name, the Broad-tailed Shaker. Tumblers may become coarse, still they would be Tumblers; and the rule is, the coarser they become the better they tumble.

Now by reducing some of our fancy Pigeons to common birds through their produce, as Dr. Morgan tells us he has done, he thinks he has proved his so-called "fact in nature," and tells us that "at school we used to do our sums backwards to prove them." True, we used to do so, but this was after we had done our sums forwards. I submit the sum has never been done forwards; it is not on record, not in history. A child has put into his hands a beautiful toy, and often with one ruthless blow utterly destroys it. He knew not who made it nor how it was made, and he cannot make another like it. He, like Dr. Morgan and Mr. Darwin, has done his sum backwards, and has only proved that he has destroyed the gem which was so well worth preserving.

Unfortunately there have been very few real ornithologists, however many copyists, the latter having only promulgated the opinions of the former, and this, I am sorry to think, is still going on. I have read most of the old ornithological works, and at one time held the same opinion as Dr. Morgan, and fancied that I could by "selection" produce a new variety, but after years of care found my efforts unrewarded in the slightest degree. From childhood I have kept common Pigeons, and have them still. How is it, then, that over a period of nearly half a century I have never been able to detect the slightest variation in the young birds except in colour?

Being but a Scotchman I cannot steam ahead in the American style. I like to be sure, however slow. But as Dr. Morgan has thrown down the gauntlet I take it up and challenge him to do his sum forwards. But I go a little further: I offer Dr. Morgan, Mr. Darwin, or any other (ladies included), a silver salver value £50, with suitable inscription, if they produce one new variety, or even any one of the old varieties, from the common Pigeon direct, or from the Blue Rock Pigeon of scientific writers. I go further still: On the same terms produce a new variety with distinctive characteristics by using any or all of the varieties known.

Dr. Morgan tells us he tried to produce white Fantails with black tails, and he used the Nun (a black-tailed bird) as a cross, but that he failed in his attempt; this there can be no doubt of. Then he found "a sport in a friend's loft"—in fact, a Fantail nearly black, and by crossing it with a pure white Fantail he obtained what he wanted. Of course, the whole affair was a mere matter of colour; but what does this teach us? Stick to the variety, or you lose in crossing! But, as Dr. Morgan seems certain that the Jacobin is "not many removes from the common," the experiment will be a short one and the prize easily won.—James Huie.

GREEN CARDS AT THE HULL RABBIT SHOW.

When I saw the "green" prize cards at the Hull Show, and before the poisoning of Mr. Firth's grand buck, and for which four days before the Hull Show I offered £10, I feared that fatal results would arise. I think committees of shows should provide white cards which can be manufactured without mineral poison, and consequently without fatal poisoning results should they be eaten by the Rabbits.

The experience of Messrs. Hudson should have taught them not to have had "green" prize cards, because they could not be ignorant of their poisonous character, and whoever put the "green" prize card in the hamper with Mr. Firth's buck did that which was very likely to end as it did.—G. R. Savage.

[Green cards are objectionable if put into the basket containing a Rabbit. The colour is usually from one of the arsenical salts. Was such a card put into the basket with Mr. Firth's buck?—Eds.]

The Swans on the Thames.—The Dyers' and Vintners' Companies have for several hundred years enjoyed the privilege of preserving Swans on the Thames from London to some miles above Windsor, and they still continue the old custom of going with their friends and guests with the Royal swanherdsman, and their own swanherds and assistants, on the first Monday in August in every year, from Lambeth, on their swan voyage, for the purpose of catching and "upping" (or marking) all the cygnets of the year. The junior warden of the Vintners' Company is called the swan warden; the appointment to the office of Royal swanherd being vested in the Lord Chamberlain for the time being. Eton College has also the privilege of keep-

ing these birds. At one period the Vintners' Company possessed over five hundred Swans, but the number is now much less, as, since they have ceased to be served up at great banquets and entertainments, the value of them has greatly declined.—(*Cassell's Old and New London for June.*)

BELGIAN CANARIES.—No. 1.

Belgian Canaries are not every fancier's fancy, and they are not the fancy either of most individuals who patronise bird exhibitions. Lady visitors in particular have a strong dislike to the Belgian breed of Canary, preferring a cosey-looking high-coloured bird—for instance, a Norwich bird—to the "ugly, consumptive-looking creatures," as they are so often pronounced to be, more particularly those birds of true Belgian form. But it may be asked, When and where are birds of "true Belgian form" to be seen? It is true that at some of the best shows last season a few good birds were exhibited, but it is invariably the case that many ill-formed, sparse-feathered, or part-feathered objects, almost approaching cripples, are sent for competition, which neither gain a mark of distinction for themselves or their owners.

I may mention in particular the last Darlington and Crystal Palace Shows where most of the finest specimens were exhibited, several of which possessed the essential points of high-class-bred birds. This is not of common occurrence, for it is only occasionally that really exceptional birds grace the stages, notwithstanding the frequent "much ado about nothing" made by some self-opinionated fanciers, who persist in "holding-up" their birds as eclipsing all others, despite the opinions of numerous other fanciers and judges included. The best of fanciers are those exhibitors who can bear defeat philosophically, or, as I once heard it remarked, "take their gruel" without becoming ill-tempered. But some fanciers will not be convinced, for

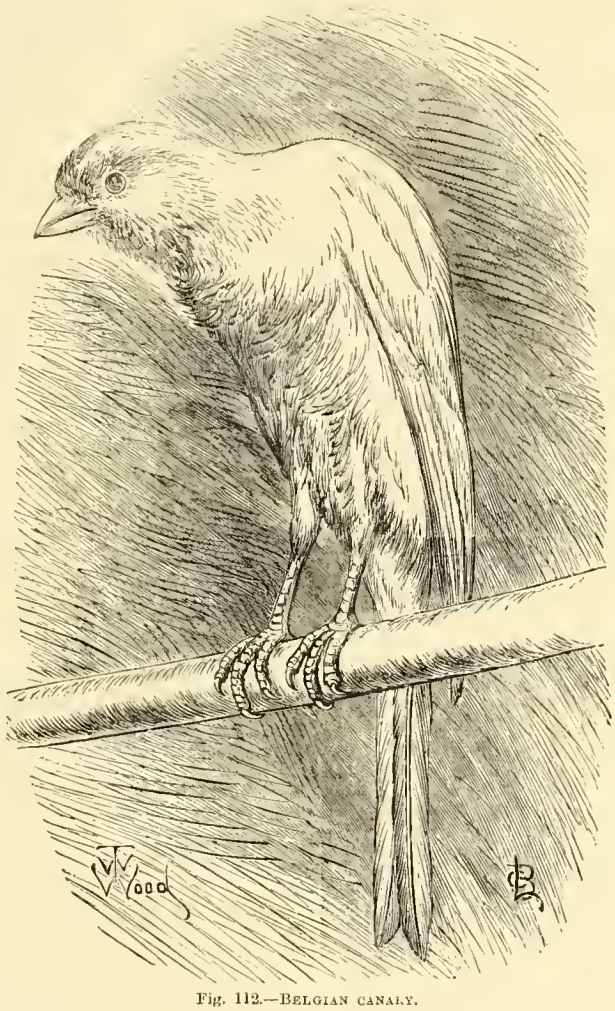


Fig. 112.—Belgian canary.

"He that complies against his will
Is of his own opinion still."

There is some just reason why a mother naturally entertains the notion that her own babe is the best, but with bird fanciers and their birds the matter is very different; therefore, when a fancier enters the birds of his choice for exhibition against others he knows nought of, and the owners of which birds have the equal right to pin their faith upon their particular feathered pets, each and all should make-up their minds to abide by the opinions and decisions of those engaged to decide upon the respective merits of the birds.

I well remember an ardent fancier who disregarded most other points in a Belgian bird except "stand," or as he used to say, a "leggy bird," contending that the bird which could show the longest legs and stand most erect upon them was, in his opinion, the best. But I believe it was looked upon as sarcasm on my part when I told him to establish for such birds the name of "Malay Belgians." Other would-be Belgian fanciers will almost entirely ignore all other points except "shouldera." Good stand and high heavy shoulders are each important points in a Belgian bird, and it is anything but agreeable to the eye to witness a heavy-shouldered bird balancing itself upon its legs with its tail projecting straight out. A bird to rank first at an exhibition should be well up in all or most points to qualify it for so distinguished a position.

I believe it was at an exhibition in the great cotton city, where I had been judging, that a person (who I afterwards found out to be a bit of a fancier), introduced himself to me in a somewhat abrupt manner by asking if my name was So-and-so. I replied in the affirmative. He said, "You've been judging Dutch birds here." I said, "Indeed, I do not recollect such a class in the schedule." He said, "I will show you the birds in the room." Curiosity induced me to follow the man to the Belgian classes, where he made a sudden pause opposite a cage containing a bird which he loudly said, "You ought to have given first prize to." I remarked that I had been judging Belgian birds not "Dutch." The man, who was the owner of the bird in question, appeared somewhat puzzled, and drew down the laughter of the several fanciers who had been listening to his remarks to me. This was merely another instance of the ignorance existing in some minds as to what really constitutes a thorough Belgian bird—understood amongst the *elite* of the fancy to be a bird of position. A Dutch bird is another bird entirely, not possessing the high shoulders of a Belgian bird.

The illustration in our present issue represents a Buff Belgian bird exhibited in Class 15 (No. 479), by Mr. James Doel, of the Prince George Hotel, Stonehouse, Devon. In the same class Mr. Doel exhibited three fine buff birds, the one from which the sketch was taken having been awarded a first prize. In Classes 14 and 15 Mr. Doel sent six specimens for competition, with which he won five prizes.

The engraving represents a three-quarter front view, not the most favourable position to show-off the bird to the best advantage, but still representing the easy style the bird possesses, and which commanded so much the attention of many enthusiastic admirers of Belgian birds at the late Crystal Palace Exhibition. The bird was sketched as it stood at ease upon the stage without either flattery or the fiddling movements being gone through.

The bird is tolerably well-up in most of the characteristic points of a Buff Belgian.—Geo. J. Barnesby.

HASLINGDEN SHOW OF POULTRY, &c.

This was held on the 10th inst., and, like all its predecessors, the day was very wet; in fact no Committee that we know is so unfortunate in the selection of a day, for though changed almost every year, this has been their unfortunate lot. As regards entries this was decidedly the show of the season in this county (Lancashire), and as to quality it is not likely to be surpassed, most of the best exhibitors contributing. The pens were of wood, mostly with wire netting in front, on account of which the birds were rather difficult to handle.

Ducks were the first section, the entries not being large, but the quality of the winners was good, although the Rouens were not in good feather; the cup going to an exquisite pair of Chilian Teal; the second in which class were Mandarins. *Cochins*, Buff, cocks, were very good, the first, not the largest, was most perfect in colour; the second large, but losing in that respect. In hens Mr. Taylor's grand old bird left little chance for others,

standing on in such a manner as to secure the cup offered for these and Brahmas; the second, also a Buff, was very good, while several others were noticed. In Partridge or White cocks the winners were of the first-named colour, both very good in all respects; many others being very good, but with the feet-feathering worn off. In hens a White was first and Partridge second, both very good hens. In Black or Cuckoo the first was Mr. Walker's Cuckoo-coloured cock; the second was a Black, but the first stood clear of all others. In hens both were Black, the first reminding us of hens of this colour which were common but unappreciated twenty years ago. Of *Brahma* cocks there were nineteen entries, and most of these were noticed, the competition being very keen. The first and second were perfect in colour and marking; the third by far the best in shape, but with a bad habit of twisting his tail on one side, showing want of condition; the fourth going to a nice light-coloured bird, which is well known. Hens were very good, but not so regular in condition, some being a little broody; the first was very large, but not as good in shape as the other winners, but in prime order. *Dorking* cocks were a good lot, but the pens a little too small for them, several of the combs being pressed on one side with the tops. Dorking hens were a very regular lot, and every pen was noticed, but the otherwise best bird had very bad feet; first was a Dark, and second a Silver-Grey. *Spanish* came next, and for intensity of interest and earnestness of exhibitors, commend us to the Spanish classes. In this case the birds were well brought out for the time of year, Mr. Beldon winning both prizes with two grand birds; Mr. Boulton's bird coming in for a very highly commended, this being of the same smooth-faced style as the winners; Mrs. Allsopp's bird was nice, but not enough of it; Mr. Newbitt's having a little too much about the eyes. Hens were very good, but Mr. Newbitt an easy winner with a grand smooth-faced hen; Mr. Powell following with the same style of a pullet. *Polands* were very good, but not numerous. In cocks first was a Silver and second Gold, the cup for the section going here; and in hens the same colours won respectively, the second a grand hen, not looking quite as we have seen her. There were four classes for *Game*, with forty-two entries, the cup going to the best Black Red hen we have seen out for some time; the second in that class being a Brown Red, the whole class being good. In Red cocks were also some grand birds, and the win here no mean attainment, the contest being so keen, first a Brown Red of last year; and second a Black Red; next to which was a well-known Black Red, a previous winner, looking awfully shaggy. In the next class a Pile was first and Duckwing second, these also being very good. Hens of these colours were the worst of the Game classes. *Hamburghs* were well provided for, having ten classes, and the entries much better than usual. Gold-pencil cocks were a good lot, but some of the best were not looking well, first-and-cup a bird of last year, perfect in all respects, but rather small; second a large bird, but scarcely as good in tail. Of hens there were but three, but the winners good. The birds noticed in Silver-pencilled were of striking quality, colour and marking on the tails being most extraordinary. Hens also good, the competition close, and pencilling of some very fine. Gold-spangled cocks all noticed—a keen contest, especially for first position, between Messrs. Duckworth's and Mr. Beldon's old birds, there being little for choice. Hens also very good, and little to choose in point of excellence. In Silver-spangles a grand old cock stood first; a smaller bird which was beautifully marked being second, and the class very good. In hens were two of the best we have ever seen, the shape and size of spangling, colour, and evenness can, we think, never be surpassed. Black Hamburghs have lost all their coarseness, and there is little tendency to the white faces. In cocks was a gem, a bird in fact without fault, and the whole class was noticed. Hens also fine in all respects, the feathers on the winners laying almost like glass on their backs; the best of all in other respects was left out on account of a slight brown on the wing ends. *French* were not numerous, but the winners good, the cup for several classes going to the La Flèche cock; the second in which was a good Crêve-Cœur. In hens was a grand Crêve-Cœur, possessing such a head as is rarely seen; second was La Flèche. In Any other variety of poultry Mr. Walker dropped upon the exhibitors with a large Turkey cock; the second being a White Malay. This order being reversed in hens. The Local classes produced some good birds, the winners in fact being quite equal to the rest of the classes. The Selling classes were large, some very good birds being shown, Spanish winning the first in both classes. Next came the *Bantams*, nine classes, and the entries good; cock, Black or Brown Red Game very good, the winners Black Reds, good in style and true to colour; many of the others of this colour having the objectionable brown shaft in the tail feathers; and Mr. Entwisle's unequalled Brown Red very highly commended was looking very slack and open in feather. Hens, a perfect Black Red, and an almost equal Brown Red, and others very good. Black or White Rose-combed were moderate, in cocks Blacks first and second; and White extra second. Hens were a class such as we do not recollect to have seen before, being almost uniformly perfect, the first going to a grand White; and second to a Black, very small and unusually good in style. Duckwing or Pile were also very good, and almost all noticed, the first and cup for Bantams going to a capital Duckwing; and second to a Pile of good style and colour. In hens the first was a Pile, which left nothing to be desired; second also a Pile, fell little short of this one. There were two classes for other varieties, in which Silver Sebrights were the winners, except in one case, which was a Golden hen second; these were very good in all points. In the Local class for Bantams the winners were very good. One arrangement we ought not to omit—viz., a strand of rope strung on poles in front of all the pens, thus keeping back the eager crowd and facilitating the judging and putting on of the prize cards.

Of PIGEONS were equally good entries, and the awards well made, the only hitch being in our opinion that more pens did not receive notice at the hands of the Judges. *Carriers* were good in both classes, and the cup won by a capital Black cock. In *Pouters* Mr. Harvey's Blue was a clear win; Mr. Horner coming second also with a good Blue. In Any other colour the winners were Whites. *Tumblers* were good, Almond winning; Messrs. Yardley's champion and Mr. Townson's grand Agate being unnoticed. *Barbs*, Black first and Red second. In foreign *Owls* first was White and Blue second, the latter one of the smallest yet seen. English Owls were first a young Silver, a good selection; and second and third Blues. *Fantails* very good; as also the *Turbits*, in which Red was first, and Blue second, and third a Yellow Shell-crown. *Magpies* a good class; as also the *Nuns*. In *Dragoons* the first was the well-known Blue so frequent a winner of late, and this was also awarded the cup; one second and three thirds being given; thirty-four birds in the class. In Dragoons any other colour three of the winners were Yellows and one White. *Jacobins* good in all respects, the usual winners being left out. *Antwerps* a good mixed class, the first-and-cup a Silver Medium-faced bird was very good; second Short-faced Silver; and third also Silver Short-faced. Birds for flying purposes were good, and the winners well selected.

Of RABBITS we were surprised to find a small entry, but these were well judged; the prizes generally falling, as has been the rule of late, except in the case of the Dutch, where Mr. Hudson's Grey and Black were reversed. The quality was very good.

DUCKS.—*Aylesbury.*—1, C Holt, Rochdale. 2, J. Walker, Rochdale. *hc*, J. Walker; J. Hedges, Aylesbury. *Rouen.*—1, T. Wakefield, Golbourne, Newton-le-Willows. 2, J. Newton, Silsden. *hc*, J. Walker; T. Wakefield. *c*, J. E. Pardey, Newton-le-Willows. *Any other variety.*—Cup, 1, and *hc*, J. Walker. 2, A. & W. H. Silvester, Sheffield.

COCHIN-CHINA.—*Buff or Cinnamon.—Cock.*—1, W. A. Taylor, Manchester. 2 and *vhc*, J. Walker. *hc*, E. Allsopp, Worcester; W. A. Taylor; J. Royle, Manchester. *Hen*—Cup, 1, and 2, W. A. Taylor. *vhc*, J. Walker. *hc*, W. H. Crabtree, Levenshulme; J. Royle, Manchester. *c*, J. Royle (2).

COCHINS.—*Partridge or White.—Cock*—1, J. Royle. 2, W. A. Taylor. *hc*, J. Walker; H. Lacy, Hebden Bridge; L. Clark, Cheadle, Hulme; T. Aspden, Church; W. H. Crabtree; W. Whitworth, jun., Longsight, Manchester; W. A. Taylor. *Hen.*—1, W Whitworth, jun. 2, W. A. Taylor. *hc*, T. Aspden; T. Stretch, Ormskirk; W. A Taylor. *c*, H. Lacy.

COCHINS.—*Black or Cuckoo.—Cock.*—1, J. Walker 2, G. Forty, Shrawardine, Shrewsbury. *hc*, G. W. Hibbert, Godley, Manchester; W. Whitworth, jun. *c*, T. Aspden. *Hen*—1, N. Cook, Chowbent. 2, W. G. Holt, Stanhill, Oswaldtwistle. *hc*, J Walker; T. Aspden (2).

BRAHMAS.—*Cock.*—1 and 2, F. Ansdell. 3, J. F. Smith, Cherry Mount, Sheffield 4, W. H. Crabtree. *hc*, J. Finchett, Llanerst; T. F. Ansdell; J. F. Smith; G Maples, jun., Wavertree, Liverpool; W. Whiteley, Sheffield. *c*, J. Lyon, St. Helen's; A. Bamford, Middleton; J. H. Picklea, Formby, Liverpool. *Hen.*—1, T. F. Ansdell. 2 and 4, J. H. Pickles. 3, C. Holt. *hc*, Rev. A. G. Brooke, Shrewsbury; T. F. Ansdell; J. F. Smith, Sheffield; W. H. Crabtree. *c*, B. B. Glover, Newton-le-Willows; A. Crossley, Todmorden.

DORKINGS.—*Cock.*—1, J. Walker. 2, W. H. King, Sandfield, Rochdale. *hc*, D. Gellatly, Meigle; T. W. L. Hind, Kendal; H. Feast, Swansea. *c*, J. H. Pickles. *Hen.*—1 and 2, J. Walker. The whole class highly commended.

SPANISH.—*Black.—Cock.*—1 and 2, H. Beldon, Goitstock, Bingley. *vhc*, J. Boulton, Bristol. *hc*, E Allsopp, Worcester; J. Walker, Wolverhampton; R. Newbitt, Epworth. *c*, J Powell, Bradford *Hen*—1, R. Newbitt. 2, J. Powell, Bradford. *vhc*, J. F. Sillitoe, Wolverhampton. *hc*, J. Clews, Walsall; E. Allsopp; J. Thresh, Bradford; J. Walker. *c*, E. Brown, Sheffield.

POLANDS.—*Cock.*—Cup, 1, and 2, H. Beldon. *hc*, A. & W. H. Silvester. *Hen.*—1 and *hc*, H. Beldon. 2, A & W H. Silvester.

GAME.—*Black or Brown Red.—Cock.*—1, R. Payne, Brierfield, Burnley. 2, J. Fletcher, Stonecleugh. *vhc*, R. Payne; C. H. Wolff, Altrincham. *hc*, W. Ormerod, Walsden, Todmorden; H. E. Martin, Sculthorpe, Fakenham; J. F. Walton, Horncliffe, Rawtenstall; J. Taylor, Bury. *c*, Miss M. J. Nelson, Cockshaw. *Hen*—Cup and 1, J. Fletcher. 2, C. H Wolff. *vhc*, J. Peat, Ormskirk. *hc*, C. W. Brierley (2); J. F Walton; J. Taylor. *c*, Miss M. J. Nelson; J. Cock, Worcester; J. Taylor.

GAME.—*Any other variety.—Cock*—1, J. F. Walton. 2, Miss M. J. Nelson. *vhc*, J. A. & H H. Staveley, Tibthorpe, Driffield; J. Mackveth. *hc*, J. Fletcher. *Hen.*—1, J. F. Walton. 2, J. Fletcher. *c*, E. Lund, Callingworth, Bingley; H. A. Pickup, Waterfoot.

HAMBURGHS.—*Golden pencilled.—Cock.*—Cup, H. Pickles, Earby, Leeds. 2, J. Robinson, Garstang. *hc*, W. Clayton, Keighley; R. W. Bracewell, Earby, Leeds; G. & J Duckworth, Church; T. P. Carver, Langthorpe, Boroughbridge. *Hen*—1, G. & J. Duckworth 2, W. Wilson, Waterfoot

HAMBURGHS.—*Silver-pencilled.—Cock.*—1 and *hc*, H. Beldon. 2, J. Robinson. *vhc*, H. Pickles; J. Robinson *hc*, H. Beldon. *c*, R. W. Bracewell. *Hen.*—1, J. Robinson. 2, H. Pickles. *hc*, H. Beldon; J. Robinson. *c*, H. Pickles; H. Beldon; H. Feast.

HAMBURGHS.—*Golden-spangled.—Cock.*—1, G. & J. Duckworth. 2, H. Beldon. *vhc*, T. Dean, Keighley. *hc*, T. Blakeman, Tettenhall, Wolverhampton; N. Marlor, Manchester; G. & J. Duckworth. *c*, H. Pickles. *Hen*—1, T. Dean, Keighley. 2, H. Beldon. *hc*, J. Newton, Silsden; N. Marlor; T. Dean; G. and J. Duckworth (2). *c*, T Blakeman.

HAMBURGHS.—*Silver spangled.—Cock.*—1, J. Fielding, Newchurch. 2, Ashton and Booth, Mottram. *vhc*, H. Beldon. *hc*, J. H. Howe, Denton; J. Robinson; S. R. Harris, Cusgarne, St. Day. *Hen.*—1, J. Fielding. 2, H. Beldon. *vhc*, Ashton & Booth. *hc*, J. Robinson, Garstang; Ashton & Booth.

HAMBURGHS.—*Black.—Cock.*—1, H Beldon. 2, W. Wilson, Waterfoot. *hc*, H. A. Clark, Carlisle; H. Beldon; N. Marlor; J. Robinson; H. Hoyle, Lumb,

Newchurch. *Hen.*—1 and *hc*, H. Hoyle. 2, N. Marlor. *c*, H. A. Clark, Carlisle; H. Beldon; J. Robinson.

French.—*Cock*—Cup and 1, E. Walton, Rawtenstall. 2, W. H. Crabtree. *hc*, G. W. Hibbert, Godley; J. J. Malden, Biggleswade; W. Whitworth, jun. *Hen.*—1, W. H. Crabtree. 2, E. Walton. *hc*, G. W. Hibbert; J. Robinson; J. J. Malden; W. Whitworth, jun.

Any other Variety.—*Cock.*—1, J. Walker (Turkey). 2, T. Cropper, Bacup. *hc*, Rev. A. G. Brooke (Malay); R. S. Harris, Cusgarne (Black Indian Game). *Hen*—1, T. Cropper. 2, J. Walker (Turkey). *hc*, J. F. Walton. *c*, Rev. A. G. Brooke (Malay).

Local Class—*Cock.*—1, J. F. Walton. 2, Furness & Sudall, Rawtenstall. *hc*, Furness & Sudall; J. Titherington, Haslingden. *c*, Whitaker & Birtwistle, Haslingden (Game). *Hen.*—1 and 2, J. F Walton. *hc*, Whitaker & Birtwistle. *c*, W. Parkinson, Haslingden (Pile Game Bantam); J. Titherington.

Selling Class.—*Cock.*—1, J. Powell Bradford. 2, R. Watkinson, Thornyholme, Burnley. 3, J. Pitt, Wolverhampton (Black Spanish). 4, J. Sanderson, Downham, Clitheroe (Malay). *hc*, Furness & Sudall; J. H. Pickles. *c*, J. E. Pardy, Newton-le-Willows (Buff Cochin); A. Bamford; J. Clarkson, Birmingham (Dark Brahma); W. Hargreaves, Bacup (Dark Brahma). *Hen.*—1, J. Powell. 2, J. E. Pardy (Buff Cochin). 3, J. Walker (Black Spanish). 4, J. F. Walton. *hc*, B. H. Bindloss, Holme (Cochin-Chins); Furness & Sudall; R. Watkinson, Thornyholme; Mrs. Wilkinson, Drinkhouses (Black Spanish); K. Dawson, Cowlishaw (Cochin). *c*, R. H Ashton (Golden-spangled); Edmondson & Wright, Barnoldswick (Partridge Cochin); K. Dawson (Brahma).

Game Bantams—*Black or Brown Red*—*Cock.*—1, E. Walton. 2, R. J. Hartley, Altrincham (Black Red Game Bantam). *vhc*, W. F Entwisle, Bradford. *hc*, J. R Fletcher; Miss M. J Nelson (2); A. Smith, Halifax; G. Maples, jun., Wavertree. *c*, J. Pushworth, Keighley. *Hen.*—1. W. F. Entwisle. 2, J. Rushworth. *vhc*, E. Walson (2). *hc*, J. R. Fletcher; Miss M. J. Nelson.

Bantams.—*Black or White.*—*Cock.*—1, Milner & Beanland, Keighley. 2, T. Cropper, Bacup. Extra 2, T. Green, Crawshawbooth. *vhc*, J. Mayor, Gloucester. *hc*, H Beldon. *Hen.*—1. R. H. Ashton. 2, T. Cropper. *hc*, J. Walker; A. Smith, Halifax (2); H. Beldon; Milner & Beanland; J. Burton, Keighley; T. Green.

Bantams.—*Duckwing or Pile.*—*Cock.*—Cup and 1, R. Newbitt. 2, J. R. Fletcher. *vhc*, G. Riley, Accrington. *hc*, Miss M. J. Nelson (2); A. Smith; Bellingham & Gill, Burnley; R. J. Hartley, Altrincham; E. Walton. *c*, F. Steel, Hipperholme. *Hen.*—1, Bellingham & Gill. 2, E. Walton. *vhc*, J. R. Fletcher; Bellingham & Gill; F. Steel. *hc*, J. Rushworth; Miss M. J. Nelson; G. Riley, Accrington; W. F. Entwisle; R. Newbitt. *c*, A. Smith, Halifax.

Bantams.—*Any other variety.*—*Cock*—1, A. Greenhalgh, Huncoat. 2, N. Cook, Chowbent. *hc*, A. & W. H. Silvester; T. P. Carver. *Hen.*—1, N. Cook. 2, T. Fell, Blackburn. *hc*, J. Walker; N. Cook; A. & W. H. Silvester; T. P. Carver.

Bantams.—*Local Class.*—*Cock.*—1, G. Birtwistle & T. Whittaker, Haslingden. 2 and *hc*, E. Walton.

PIGEONS.

Carriers.—*Cock.*—Cup, P. R. Spencer, Hereford. 2, H. Yardley, Birmingham. *hc*, J. Walker; E Horner (2). *Hen.*—1, W. Nottage, Northampton. 2, P. R. Spencer. *hc*, J. Walker; E. Horner.

Pouters.—*Blue or Black.*—1, W. Harvey, Sheffield. 2, E. Horner. *hc*, J. Hairsine, Hull. *c*, W. Nottage; P. R. Spencer. *Any other colour.*—1, L. & W. Watkin, Northampton. 2, W. Harvey.

Tumblers.—1, J. Gardner, Preston. 2, W. Brydone, Dunse. *hc*, E. Horner. *c*, T. Kirby, Rochdale.

Barbs.—1, H. Yardley. 2, J. Stanley. *hc*, J. Walker; E. Horner (2).

Owls—*Foreign.*—1, T. W. Townson, Bowdon. 2 and *hc*, T. Kirby, Rochdale. *English.*—Cup, T. W. Townson. 2, J. Gardner, Preston. 3, T. Charnley, Blackburn.

Fantails.—1, J. Walker, Newark. 2, T. S. Stephenson, Newbiggin, Beverley. 3, W. J. Warhurst, Stalybridge. *hc*, W. Lumb, Rochdale.

Turbits.—1, T. W. Townson. 2, T. S. Stephenson. 3, W. Brydone. *hc*, H. Yardley; E. Horner (2).

Magpies.—1, E. Horner. 2, J. Richmond, Oswaldtwistle. *hc*, M. Ord, Sands, Sedgefield.

Nuns—1, J. B. Bowdon. 2, E. Horner. *hc*, J. Richmond; E. Horner.

Dragoons—*Blue or Silver.*—Cup, R. Woods, Mansfield. 2, R. White, Manchester. 3, R. Woods. Extra 3, F. Eastwood, Littleborough; R. Woods. *hc*, W. Smith, Walton, Liverpool; J. Holland, Manchester. *Any other variety*—J. J. Stanley, Blackburn. 2, F. Graham, Birkenhead. 3, R. Woods; J. Holland. *hc*, T. Charnley; F. Woodhouse.

Jacobins.—1, W. Brydone. 2, G. Richardson, Oulder, Rochdale. 3, W. Lumb. *hc*, S. Lawson; J. Richmond; E. Horner.

Antwerps.—Cup, F. Eastwood. 2, R. Brierley, Bury. 3, W. Harrison, Burnley; W. Harvey. *hc*, H. Yardley; J. Wright, Manchester. *c*, J. Stanley; A. Bingham, Manchester.

Birds for Flying Purposes.—1, J. Wright 2, T. H. Holden, Haslingden. Extra 3, B. Rawnsley, Bingley (2). *hc*, R. Brierley.

Any other Variety.—1, W. Harvey. 2, T. W. Townson. *hc*, J. B. Bowdon; A. & W. H. Silvester. *c*, A. & W. H. Silvester.

Local Class.—*Any variety.*—1, G. Fielding, jun., Haslingden. 2, J. S. Titherington, Haslingden.

Selling Class.—1, J. B. Bowdon. 2, W. Dugdale, Burnley. *hc*, W. Brydone. *c*, R. Brierley.

RABBITS.

Lop-eared.—*Buck*—1, A. Hudson, Hull. 2, T. Schofield, jun, Cheetham. *vhc*. Mrs H. Duckworth, Spalding. *Doe.*—Cup and 2, J. Irving, Blackburn. *hc*, T. Schofield; A. Hudson.

Angora.—*Buck or Doe*—1, A. Atkinson, Huddersfield. 2, J. Orden.

Himalayan.—*Buck or Doe.*—2, A. Atkinson. *hc*, J. G. Meadowcroft, Rochdale; B. Hopkinson, Fishpool, Bury. *c*, R H. Greenwood, Rochdale.

Silver-Grey.—*Buck or Doe*—1 and *hc*, A. Hudson. 2, Miss Mortimer, Reed-Hall, Ross.

Any other Variety.—*Buck or Doe.*—1, A. Hudson. 2, J. E. Pilgrim. *hc*, J. Irving; A. Hudson.

Selling Class.—*Buck or Doe.*—1, A. Simpson, Rochdale. 2, J. Ogden.

Judges.—*Poultry:* Mr. Hutton, Pudsey. *Pigeons:* Capt. Heaton, Worsley. *Rabbits:* Mr. J. Boyle, jun., Blackburn.

BEES IN A CHIMNEY—INTRUSIVE LETTERS.

"W. J. M." asks how a swarm can be expelled from a chimney very difficult of access? It is very difficult either to expel or hive a swarm from a chimney. If a hive of combs could be placed within a few feet of the swarm before the bees commence to build combs of their own they would readily take to combs, but after they have commenced to build they would not leave their own combs for those in the hive. In the attempts to hive swarms in chimneys there are the difficulties of ascent, the risk of being well stung, and the uncertainty of success after all. Smoke from corduroy or tobacco will disperse the bees somewhat for a little while, but will not dispel them.

If "W. J. M." wishes to take the bees alive out of their present position, we would advise him to throw a wet sack over the top of the chimney with a view to bring them all down on to a sheet spread over the grate by chloroform or puff-ball. If the powers of either of these can be applied to the bees they will fall down the chimney with all their powers paralysed, and may be gathered into a hive before they recover their senses and activity. Afterwards the bees would naturally fly back to the chimney, and they might induce the queen to go with them; hence in hiving a swarm from a chimney it is desirable to send the swarm to a distance of two miles for a week or two. If "W. J. M." wishes merely to clean his chimney, and cares nothing about preserving the lives of the bees, he could destroy them by casting a wet sack over the top of the chimney, and applying the fumes of brimstone from below. By leaving them where they are for two or three months he might obtain all the honey they may gather. If any of the combs remain in the chimney after the bees shall be expelled, they would attract another swarm.

The hive where the bees are hanging out but still without drones is all right and will swarm. The absence of drones is simply an indication that the hive has very little drone-comb in it, or what little it has is filled with honey. The absence of drones is rather a favourable symptom than otherwise.

Will the readers of this Journal please to remember that I have not time to answer private communications? From twenty to thirty letters of inquiry every week are being sent to me. If many of the letters were answered through the columns of this Journal hundreds of readers would derive the benefits of the answers as well as the parties putting the questions. My time is fully engaged with my business, and it would take a clerk half his time to answer all the letters received here.—A. Pettigrew.

[Readers who write to our correspondents privately in defiance of the notice we permanently publish requesting that they will not do so, act discourteously and do as they would not like to be done by. We beg of Mr. Pettigrew and of all of our other correspondents that they will never reply to such intrusive letters. All applications for information should come to our office.—Eds.]

SWARMING.

As the A B C and multiplication table have to be gone over many times before young people can fairly master them, many of the simplest lessons in bee-management have to be repeated often before beginners can fully understand them or put them in practice; and many young bee-keepers, liking example better than precept, assert that if they could only see someone else carry out the lessons, they would do them afterwards. They lack confidence in their own ability and not in the truth of the lessons taught. As we are now in the midst of the swarming season, and have so many apiarians around us seeking information, we may here help some of them by going over again ground often trod.

A lady called to ask why a first swarm of hers had issued three times, and always returned to the old hive. She had seen no queen in front of the flight-board, and said she would gladly pay for a cab to carry me to her garden if I would consent to go there and tell her why the bees always went back. Her garden was visited, when all her hives were found healthy and ready for swarming. I swarmed them artificially for her, and showed her the queen from the hive that had had three miscarriages in swarming. Why the queen declined to go with the swarm three times in succession is very unusual, but no one can account for her refusal.

Another lady writes to ask why her swarm left a new hive after it had been in it four or five hours. Bees have likes and dislikes, whims and fancies, which no one can explain. We have had a swarm so fastidious and whimsical that it would settle in no hive we could give it. It forsook three new hives in twenty-four hours, became fugitive at last, and was lost.

"Two queens went with my first swarm," says one correspondent; and another says, "My bees piped this year before they swarmed. How is this to be accounted for?" In both cases the hives had lost their old queens and had bred young queens. When these came to perfection the bees swarmed, as in the case of second swarms. Two young queens sometimes go with second swarms. Queens twelve months old never pipe before swarming. So far as the present season has gone bees swarm readily. In many cases they have set queens and swarmed before they were well filled, and in almost all cases second swarms are sent off at the proper time afterwards. Some seasons bees seem to hesitate a long time about swarming, and many hives never swarm at all. Some seasons are remarkable for the abundance of swarms. First and second, and in some instances third, swarms issue readily, and in such seasons early first swarms send off virgin swarms.

The readers of the *Journal of Horticulture* are aware that for profit from bees, and to possess and keep the apiary full of strong healthy hives, I prefer the swarming mode of management to any other; but many bee-keepers prefer the non-swarming system. We take all the first swarms we can till the end of

June. In ordinary seasons they fill their hives, and many of them fill supers as well. Most of them become too heavy for stocks—that is to say, are too well filled with honey for keeping. Hives beyond 80 lbs. each are put down for honey. Those beyond 60 lbs. yield to the comb-knife 10 to 15 lbs. of honeycomb each, and make stock hives afterwards. In favourable seasons for honey almost all the first swarms become too full of honey for keeping. Hives in which the bees have been fed during the winter months, and with 20 or 30 lbs. to spare in spring, do not yield large swarms, but the honey in them is as good the second year as it is the first.

Second swarms or casts are taken from all stock hives that swarm in May. These make excellent stocks for another year, and their mother hives become quite strong enough without them. If second swarms are not taken from early swarms they become too heavy for stocks, even if supers be filled on them. From late swarmers we do not take second swarms; but when they are heavy at the swarming season the bees are generally turned out of them into empty hives three weeks after they swarm, and the honey taken from them. Sometimes the bees are driven ont of light swarmers or stocks as soon as their queens are hatched, into empty hives, and re-peopled by later first swarms before their brood cools. The queens of first swarms are then laying so many eggs that the combs of the hives thus re-peopled are filled at once with brood, and continne to be filled with brood till the end of the season. The reader will at once see that this stratagem gives a great lift to late swarms, pntting them on a par with earlier swarms.

Some six weeks or two months ago we expressed our fears that many hives would this season be affected with foul brood, the very cold weather of March having been of such a chilling character. We have lately smelt foul brood in several stock hives. Hives affected with this disease can never prosper or be cured. As soon as they can yield moderately-sized swarms they should be made artificially and put into empty hives, for small swarms will do better in empty hives than all the bees would do amongst the foul brood. All the bees of course could and should be removed from foul hives three weeks after their first swarms. Swarms from foul hives do not carry the disease with them. By the swarming system of management the apiarian may stamp out this terrible disease from his apiary, and stamp it out by increasing the number of his stocks and taking the honey from all his affected hives.

Three days ago we swarmed two hives artificially standing together. The bees of one of the stocks commenced to set queens as soon as the swarm was taken from it; the bees of one of the others remained in a state of grief and commotion for more than two days, searching hither and thither for their lost queen before they began to set eggs in royal cells. I have never witnessed greater consternation and commotion among bees bereft of their queen that had eggs to set. To-day they set eggs in royal cells. No one can tell why the bees of the one hive acted so differently from those of the other.

Yesterday I saw a second swarm begin to issue from a hive when I went near to watch the queen come out. She was nearly the last bee in the swarm to leave the mother hive. While the queen was on the flight-board a worker intentionally caught her by a leg, but whether the bee meant to say "good-bye" or "don't go" no one can tell. I put two young queens and a second swarm into an empty hive. In about five minutes afterwards the queens met and fought. It was a short but fatal battle, for one of them was mortally wounded in a twinkling, and almost dead before her victorious and triumphant sister was scared off by my hand put forth to save her.—A. Pettigrew.

OUR LETTER BOX.

Crowle Show.—Our reporter omitted to notice that Mr. W. Whitworth, jun., obtained a first and special prize for White Cochins, and second prize for Houdans; and that Mr. W. H. Crabtree obtained a second prize for Dorkings, first for Light Brahmas, third for Dark Brahmas, and highly commended for Crêve-Cœurs.

Dari.—Miss E. W. Bireley, Telegraph House, Great Yarmouth, wishes to know where she can procure Dari for her poultry.

Bone Meal (*W. Hayser*).—It is chiefly used mixed with food for chickens. The phosphate of lime in the meal is believed to promote the formation of bones and feathers.

Driven Bees (*Triceps*).—We think you drove the queen with the bees into the bottom hive, which, if we understand you rightly, acts as a nadir. The use of nadirs very often, but not always, do prevent swarming. A few dozens of dead bees around a hive may often be seen when all in it is going on healthily.

Hives (*T. R., near Birmingham*).—The hives you refer to are made of straw in a dry state and split canes. During both summer and winter they should be covered sufficiently to protect them from rain. Swarms put into empty hives in September may be well and rapidly fed, and thus made into strong stocks, well able to live over the winter. The bee-keepers in your neighbourhood, or any other who kill their bees to get the honey, have a lesson or two to learn.

Preventino Swarming (*A Novice*).—No kind of hive prevents swarming. Bees naturally swarm when their houses, whatever be their structure or shape, become full. But generally speaking they may be kept from swarming by enlarging their houses from below—that is to say, by eking or adding to their hives, and thus making them one-third or fourth larger at a time. In favourable years for honey several such ekes may be required, and it is better and safer to apply them before the hives are overcrowded.

Crested Norwich Canary.—"I notice under the heading of 'Our Letter Box' in last week's Journal Mr. W. B. Hovell, of Norwich, says:—'Mr. Geo. J. Barnesby is not correct in his description of fig. 92 when he says Messrs. G. & J. Mackley's Crested bird was the bird which took first prize last year at the Crystal Palace Show.' Mr. Hovell certainly charges me with an assertion I never made, and which charge is not true. Upon referring to p. 381 of the Journal Mr. Hovell will find that what I stated was that 'the specimen shown by Messrs. G. & J. Mackley, Norwich, in Class 13 (No. 437), at the last Crystal Palace Show, stood at the head of forty-eight others.' This assertion I repeat. As to the bird's performances, and whether the same bird did or did not take first or second at Yarmouth or Lowestoft, is quite immaterial so far as I am concerned. I beg to enclose Messrs. Mackley's letter (not a private one to me, as the contents were for publication), stating where and what prizes their Crested bird had won, and upon the faith of which letter I remarked.—G. J. Barnesby."

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. June.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1 ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg	deg.		deg.	deg	deg.	deg.	deg.	In.
We. 9	29.869	68 3	61.0	S.E.	62 0	85.1	52 0	118.8	48.2	—
Th. 10	29 716	63.8	54 9	S.W.	61 2	68 5	52 8	116.8	49 8	0 546
Fri. 11	29.582	58.0	51 7	W.	60.0	64.8	48.1	121.6	49 6	0 042
Sat. 12	29 690	69 7	64 3	S.	68.7	62.1	48.2	104 9	45.0	0 328
Sun. 13	29 792	58.2	54.8	S.	56 8	63.6	46 2	102.0	43 3	0.098
Mo. 14	29 594	62 1	57.5	S.W.	57.0	64.3	53 5	104.1	53.1	0.161
Tu. 15	29 470	59 8	53 0	S.	57.5	65.0	50 2	114 2	48 3	0 0.6
Means	29 673	61.4	55.0		69.0	67.8	60.1	111.8	48.3	1.190

REMARKS.

9th.—Fine early; but stormlike by noon; frequent thunder after 2.30 P.M., but neither near nor loud; the evening cool and pleasant.

10th.—Cloudy and rainlike all day; frequent slight showers, one heavy one, but of short duration, about 5 P.M.; fair night.

11th.—Fine at 9 A.M.; but nearly half an inch of rain had fallen in the early morning; very windy, with showers, during the day; but fine at night.

12th.—Fine but cloudy early; showery all the after part of the day. The rain at times rather heavy.

13th.—Rain more or less all day, sometimes heavy.

14th.—Very windy, with frequent showers; warmer towards night.

15th.—Still very windy and showery, the wind at times unusually high for the time of year, but much brighter than it has been for several days.

The mean temperatures, except that under ground, and the shade maximum about 4° below last week; the former fell 1° only, and the latter 12°. Very windy and much rain.—G. J. Symons.

COVENT GARDEN MARKET.—June 16.

We are now getting rather heavily supplied with outdoor produce, and also from the Continent, but as the Kent goods now comprise Early White Cherries and Dukes from standards, we must expect a diminution in the consignments. With some sunny weather we may expect in a few days large quantities of Strawberries from the adjacent parts of London. Potatoes maintain last week's rates.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples	½ sieve	2 6 to 8 6	Mulberries	lb.	0 0 to 0 0
Apricots	box	2 6 4 0	Nectarines	dozen	15 0 30 0
Cherries	box	2 0 4 0	Oranges	℔ 100	6 0 14 0
Chestnuts	bushel	0 0 0 0	Peaches	dozen	15 0 90 0
Currants	½ sieve	0 0 0 0	Pears, kitchen	dozen	4 0 0 0
Black	do.	0 0 0 0	dessert	dozen	4 0 0 0
Figs	dozen	8 0 12 0	Pine Apples	lb.	6 0 10 0
Filberts	lb.	0 0 0 0	Plums	½ sieve	0 0 0 0
Cobs	lb.	0 0 0 0	Quinces	dozen	0 0 0 0
Gooseberries	quart	0 4 0 6	Raspberries	lb.	0 0 0 0
Grapes, hothouse	lb.	3 6 10 0	Strawberries	lb.	1 0 4 0
Lemons	℔ 100	8 0 12 0	Walnuts	bushel	8 0 12 0
Melons	each	9 0 8 0	ditto	℔ 100	1 0 1 6

VEGETABLES.

	s	d.	s. d.		e. d.	s. d.
Artichokes	dozen	3	0 to 6 0	Leeks	bunch	0 4 to 0 0
Asparagus	℔ 100	3	0 6 0	Lettuce	dozen	1 0 2 0
French	bundle	0	0 0 0	Mushrooms	pottle	0 9 2 0
Beans, Kidney	℔ 100	2	0 0 0	Mustard & Cress	punnet	0 2 0 0
Broad	bushel	6	0 0 0	Onions	bushel	4 0 8 0
Beet, Red	dozen	2	0 4 0	pickling	quart	0 6 0 0
Broccoli	bundle	0	9 1 6	Parsley	doz. bunches	4 0 6 0
Brussels Sprouts	½ sieve	0	0 0 0	Parsnips	dozen	0 9 1 0
Cabbage	dozen	1	0 2 0	Peas	quart	1 0 2 0
Carrots	bunch	0	6 0 8	Potatoes	bushel	4 0 6 0
Capsicums	℔ 100	0	0 0 0	Kidney	do.	4 0 8 0
Cauliflower	dozen	4	0 8 0	Radishes	doz. bunches	1 0 1 6
Celery	bundle	1	6 2 0	Rhubarb	bundle	0 4 0 9
Coleworts	doz. bunches	2	0 4 0	Salsafy	bundle	1 6 0 0
Cucumbers	each	0	6 1 0	Scorzonera	bundle	1 0 0 0
pickling	dozen	0	0 0 0	Seakale	basket	0 0 0 0
Endive	dozen	2	0 0 0	Shallots	lb.	0 3 0 0 4
Fennel	bunch	0	3 0 0	Spinach	bushel	3 0 0 0
Garlic	lb.	0	6 0 0	Tomatoes	dozen	2 0 4 0
Herbs	bunch	0	3 0 0	Turnips	bunch	0 6 1 0
Horseradish	bundle	0	0 4 0	Vegetable Marrows	doz.	0 0 0 0

WEEKLY CALENDAR.

Day of Month	Day of Week.	JUNE 24—30, 1875.	Average Temperature near London.			Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
24	Th	Royal Horticultural Society of Ireland Summer Exhi-	74.1	49.1	61.1	45 af 3	19 af 8	39af 11	14 af 9	21	2 3	175
25	F	[bition. Alexandra Palace Great Rose Show.	73.0	49.2	61.1	46 3	19 8	51 11	34 10	22	2 16	176
26	S	Crystal Palace Great Rose Show.	74.3	49 2	61.7	46 3	19 8	morn.	55 11	(	2 29	177
27	Sun	5 Sunday after Trinity.	72 8	48 2	60.5	47 3	19 8	2 0	after.	24	2 41	178
28	M		73.7	49.1	61.4	47 3	19 8	15 0	44 2	25	2 53	179
29	Tu	Shrewsbury and Hereford (Rose) Shows.	73.2	48.5	60.8	48 3	19 8	31 0	15 4	26	3 5	180
30	W	Royal Botanic Society—Exhibition of Fruit and Cut [Flowers. Maidstone and Wisbeach Rose Shows.	73.1	48.3	60.7	48 3	16 8	52 0	48 5	27	3 17	181

From observations taken near London during forty-three years, the average day temperature of the week is 73.4°; and its night temperature 48 8°.

SEMI-NATURAL FLOWER GARDENING.

SOME writers go into raptures about "the pathless woods." They are certainly very enjoyable on a hot summer's day, provided the underwood is not too thick; but I think one of the most enjoyable spots on earth is that which is half wood, half shrubbery, carpeted with low-growing plants prodncing a succession of flowers through the four seasons, and with a well-drained walk, not too trimly kept, but such as can be used in all weathers, where there are gigantic timber trees to shelter from sun or rain, and rustic seats at intervals on which to rest while listening to the music of the birds and inhaling the odours of the flowers. If ever I make a spring garden in accordance with my own ideas it will be in such a spot as this; aye, and my summer, autumn, and winter gardens shall be there too, for I will have a perpetual succession of flowers from the Winter Aconite to the Christmas Rose—not in ribbon borders and carpet patterns, but in humble imitation of Nature's own sweet ways. I have never yet seen a spring garden that I thought even worth calling pretty; I have not seen many, it is true, but I do not think it possible for Daisies, Primroses, and such-like plants to look well in straight lines and formal beds: they have such an uncomfortable look, as if conscious of being out of their proper place, and cut about as sorry a figure as I should expect a journeyman chimneysweep to do at Her Majesty's Drawing-room.

The handsomest of deciduous underwood is, I think, the Hazel. One peep where the plants are rather thin gives you a sight of the Grape Hyacinth, studded like jewels in the green of the Dog Mercury reaching away far into the wood, and ending you know not where. So much the better, the imagination can do the rest. A little further on are Primroses by the acre, and yet there is not a plant too many; place a fourth of that quantity anywhere else but in a wood, and you would not care to look at them a second time. There are other grand masses composed of such things as the Wood Anemone, the Foxglove, Bugloss, &c.; these are perfect in themselves and cannot be improved on, the only thing to do is to take care they are not too much hid by the underwood; they are better for being partially hid—beauty is best appreciated when it is half veiled.

But there are spots near the walk where there are plants of an objectionable nature, or where the ground is altogether bare, and filling these with appropriate plants is most interesting, and perhaps requires a greater amount of taste than any other kind of ornamental gardening, unless it be the planting of large-growing trees. We are so apt to overdo it. It is very little that is required, and I should advise anyone who is not an adept at tree art to do that little very gradually indeed. Every existing feature should be turned to good account. Do not make any great changes without thinking the matter over many times in different moods of mind. We are not always in the right mood for arranging things of this sort. The poetic part of our nature will not always come forward to order; we must wait, and not attempt to force it. Perhaps some fine morning, if we rise at the same time as the cuckoo does, and take a walk to the spot before we face the dozens of failures and vexations we are sure to meet with in the garden, the happiest of thoughts will flash across our mind, and the note-book is all that is required.

Too much formality must be avoided, but the thought has often struck me what a very little removed from regular lines are our best landscape effects. In trying to make new planting appear natural we are apt to make it too irregular; and it is the same in making rockwork and other imitations of Nature. A certain amount of ruggedness gives grandeur, as does the discordant seventh in a musical arrangement when judiciously introduced, but repeat that discordant combination too frequently, and it has anything but a grand effect.

There are many handsome plants which will take care of themselves as well as do the commonest weeds, and which may be introduced into our shrubberies and woodland walks, adding a great charm to them, and yet looking so natural that anyone not well acquainted with plants might think they were wild. This is the very object to aim at. The greatest art lies in concealing art. If I am asked concerning a plant, or a mass of plants, which has only been in position a year or two, "Did you plant that, or was it always there?" I feel it is the greatest compliment I can receive on the score of good taste.

Have you a spot where nothing will grow—say stiff clay, and very much shaded? That is the place for Tussilago fragrans; it is nearly always green, and has flowers in winter scented like May blossom. The Periwinkles are all handsome and will take care of themselves; the larger green-leaved species, Vinca major, will overrun most weeds, and kill them in time. Its variegated variety (V. major variegata, syn. elegantissima) is equally hardy, and is one of the handsomest variegated plants we have. V. minor, V. minor alba, and V. minor variegata are all useful; these are not so robust as the first named.

There is a bank shaded but not overhung with trees—the very place for British and North American Ferns. If the soil is too heavy the plants must be merely placed on the top of it, and surrounded with some of the leaf mould to be found in the neighbouring hollow. Near by is a handsome Rhododendron, very attractive while in flower, but rather dull-looking in autumn; we must light this spot up by placing a Torch plant (Tritoma) in front of it. The Tritoma looks handsome as a specimen on the grass, but to see it in perfection it must be backed by a dense green bush. T. uvaria glaucescens flowers in September; T. grandis and other varieties a month or two later. Russian Violets must not be forgotten for flowering in the winter: I think the old small variety is the hardiest. I have tried The Czar for this purpose, but it did not answer my expectations.

Climbing Briars are very handsome, finding their own

way up the stems of old trees, and hanging in natural wreaths from the branches. Gloire de Dijon Rose may also be used for this purpose, as also may Honeysuckles and the gorgeous Clematis; while for carpeting there are Golden Thyme, Stachys, Musk, St. John's Wort, London Pride, variegated Coltsfoot, &c. Specimens may include Spiræas, Fuchsia Riccartoni and others, Anemone vitifolia and Honorine Jobert, Martagon and other Lilies, and Pæonies. Bulbs, too, will make a pleasing feature, and may include Snowdrops, Snowflakes, Daffodils, Narciseus, and Jonquils.

One thing I recommend specially to be avoided in all shrubberies, that is not to plant flowers in continuous lines along the edges of shrubs, as was very commonly done in the London parks a few years since; but plant in irregular masses between and outside of the shrubs, covering all the soil so that not a particle of it is visible. If turf is used between the shrubs and the walk it should not be cut to a line next to the shrubs, but should lose itself in them.

Deciduous shrubs should not be trimmed up to look like an exhibition Azalea, but when too thick some should be cut clean out, or at least so managed that they will not show they have been cut. Evergreen shrubs are not so objectionable-looking when cut in shape, but even these should not be trimmed too much.—William Taylor.

LATE PEAS.

Seed sown at once will produce a crop of Peas in the autumn, and a most valuable crop it is. For some years I have in the north of England gathered Peas throughout November from seed sown from the 20th to the 27th of June in each year, and I know of no crop which has been more serviceable and more prized. Owing to hot weather there is generally a dearth of Green Peas towards the autumn; the plants, when in bloom and podding, cannot sustain the drought, but in a younger state they may be carried through, and will swell to perfection with the autumn rains. Three things must be borne in mind in preparing for this latest crop—viz., a hardy vigorous sort must be selected, the seed must be sown in trenches, and several rows must be sown at the same time.

The sort I have found the best for late autumn use is Ne Plus Ultra. It resists mildew, is a continuous grower and podder, and is of good quality. Other sorts will produce Peas in the autumn; but I have found none in all respects so good as this fine old sort. It sets its flowers well in wet weather, and is of good flavour, even if the haulm is browned by frost. As a dwarf variety Hair's Mammoth is good for late use; but where sticks are plentiful I commend Ne Plus Ultra. In October, if growing very vigorously, it is advisable to pinch-off the tips of the growth, for at that season the late flowers cannot perfect peas, and the lower pods will be accelerated in the swelling.

They must be sown in trenches, or they may languish in the tropical weather of July and August. If on the level it is impossible to give them sufficient water, but if in trenches it is easy to give a thorough deluge once a week. The trenches should be as wide apart as possible, and be dug-out much the same as for Celery, and have some manure dug-in deeply. If the rows are close together the flowers will not set in the autumn, for the haulm then grows exuberantly, and is long-jointed and sparse of bloom if lacking air. Rows of Ne Plus Ultra for this latest sowing should be 8 feet apart.

A large breadth should be sown. It must be remembered that there can be no succession to this sowing, and that the crop itself will not bear a third of the produce it would if sown in February or March. The crop will yield its own succession so long as open weather continues. I have in an exceptional season gathered from the same rows in October and in December. Suppose three rows to be sufficient in the ordinary Pea season, nine rows will be necessary to give ample gatherings so late as this crop will be. But what of the ground? Well, it is generally as easy to find ground for nine rows now as for three rows in March or April. Rows of early Potatoes can be taken out where the Peas are required, or the Cabbage or late Broccoli ground is vacant.

Perhaps the early Potatoes may not be sufficiently ripe to dig up by whole rows at a time for table use, but they are ripe enough for seed. These unripe Potatoes make the very best of seed. I cannot say why it is, but many years' experience enables me to vouch for the fact that Potatoes which are taken up when in an unripe state will yield crops fully as early and quite as heavy as will those which had been left in the ground to become matured. In fact, I have found after repeated trials that the unripe seed is the best. It is also the only means I know of resisting the disease.

Now, if an abundance of Green Peas can be produced in the late autumn months, and at the same time a supply of sound early Potatoes are provided for planting, the work is surely recommendable. Every fourth row of Potatoes taken up and the ground thoroughly soaked with liquid manure—say guano water of a strength of 1 to 2 ozs. per gallon—will afford space sufficiently enriched for the growth of Peas. This plan is merely suggested as affording room for the Peas when other ground is not vacant, and because the practice has been tried and has answered well. By the time this late crop of Peas requires support sticks from the earlier crops will be at liberty, and only need to be removed from the dying rows to those which are in full and vigorous growth. The early sorts of Peas are often sown at this season, and occasionally yield useful produce; but should a term of tropical weather set in when they are 6 inches high it is almost impossible to prevent them from flowering, and their produce is then neither late nor bountiful. Marrows, and especially the sort named, will, on the other hand, pass through the drought under which weaker sorts succumb, and will give a supply of Peas of good quality even when the rows are white by frost.

Occasionally an early and severe frost has spoiled a quantity of Peas on these late rows; but more than once I have been sufficiently wide awake to gather them on the approach of danger, and by sticking the full pods closely together in wet sand and out of the reach of frost the Peas have been kept for a fortnight as fresh and good as if growing on the haulm. By that means I have been enabled to supply an occasional dish of excellent Peas when the ground has been covered with 6 inches of snow, and once to a dinner party where the guests had sharpened their appetites by an afternoon's skating on the lake. The verdict was that this dish of Peas was decidedly late and undoubtedly good. They were Ne Plus Ultras.—A Northern Gardener.

BUTTON-HOLE ROSES.

Before answering the query of "H. M. H." I must make a few observations. For button-holes I think handsome buds with fine sepals and good foliage, or partially expanded Roses of the globular form, are best. In hot weather expanded Roses, if the petals are flimsy, will soon be withered. We want more silica (flint) in our petals. Moss Roses are best in their unexpanded form, for when fully expanded they lose their mossy character. I will give a list of Roses suitable for the purpose among the summer and autumnal Roses.

Summer Roses.—Moss, Common Moss, the Created, and Vandsë.

Variegated Roses.—Œillet Parfait, Madeleine, and Tricolore de Flandres. These must be expanded to see their beauty.

The following Roses should be only partially open—Coupe d'Hébé and White Provence.

Autumnal Roses.—These should be in bud form, or only partially expanded. Jules Margottin, fine sepals; Madame C. Joigneaux, Claude Levet, most beautiful red-currant crimson and nicely scented, which is not the case with Etienne Levet, which is otherwise very good. The next are in the line of yellow, and are good; Maréchal Niel, Gloire de Dijon, Céline Forestier, and Triomphe de Rennes. The above are best for the purpose when only partially open.

Tea Roses.—Devoniensis, Souvenir d'Elise Vardon, and Madame Willermoz.

Bourbon.—Souvenir de la Malmaison, best in the autumn. The following Hybrid Perpetuals may be expanded fully:—Charles Lefebvre, Sénateur Vaisse, Madame Victor Verdier, Cécile de Chabrillant, Duke of Edinburgh, and Marguerite de St. Amand. Madame Knorr is most beautiful in bud form. The next lot are high-coloured, varying from crimson purple to maroon, and should be expanded when used for the button-hole. They are beautiful. The two first I name are new and admirable Roses, both by E. Verdier—John Harrison, Theodore Buchelet; Abbé Bramerel, Maxime de la Rocheterie, Baron Chaurand, most beautiful; and Dr. Jamain, very beautiful. The next is a new Rose, fiery crimson, good, and good for the purpose when fully expanded—Firebrand (W. Paul).

I regret that some of our late and good Roses have no scent. I thank Mr. Camm for calling attention to that excellent quality, in which the Bourbons and China Roses are deficient. Souvenir de la Malmaison is the only scentless Rose named above.

Lamarque is the finest scented, and Goubault the most peculiar in its scent.—W. F. Radclyffe.

EXPERIMENTS IN STRAWBERRY CULTURE.

It is well known that the young Strawberry plant will thrust its roots into the hardest soil—*i.e.*, a garden walk, in which it especially seems to luxuriate. I placed thick squares of turf 9 by 9 inches to the amount of several hundreds on the Strawberry beds, and three good runners on each turf. By the end of the season these plants were as large as those of a year old. These were planted out at the usual distance, and are now equal to plants of two or three years old, and bearing a crop quite equal to those of that age. As there were more plants than were required, several were left lying about on the surface, and were not planted out till late this spring. This late planting has not at all retarded their growth or lessened the crop. About the middle of March some of these plants that had been lying about were brought into the hothouse, and ripened a very fine crop of Sir J. Paxton.

For forcing there is no occasion to pot these plants, they will grow as well on boards if treated thus: Cover the boards with a layer of turf, grass side downwards, free from wireworm (which can be effected by scalding), on this turf place some rotten dung, and then the square of turf with the plants on the top of this. They may be grown in Vine borders if placed close to the glass. By the above plan Strawberries may be grown on fresh land every year to great advantage.—Observer.

AURICULA SHOWING.

The letters which have appeared on this subject have especially interested one who looks back to the time when the Auricula held as high a place in the estimation of metropolitan florists as it seems now to do with our northern friends; when good old John Dickson of Acre Lane was in full force, and amateurs who have long since passed away or retired from active service used to throng the tables at "The Horns" and the Surrey Gardens; and if any of them had been told that the day would come when their beloved favourite should be allowed to go with a wooden crutch, or a plant with three or four trusses of bloom be considered "the thing," they would have opened their eyes with astonishment. As a disciple of (in florists' flowers) George Glenny, and as an unworthy successor of the amateurs I speak of, I must side with Mr. Horner in the view he has taken on page 448, and indeed in the different views held by north or south I hold in many points with the northerners. I maintain that above all things refinement is the quality for which the Auricula grower should win. I know it requires good moral courage to maintain this when large and most vigorous plants throw your smaller ones into the shade, and when in the eyes of nineteen-twentieths of the visitors these are unquestionably regarded as the best. And here let me distinctly state that in saying this I do not for one moment mean to maintain that I had any chance this year in our metropolitan exhibition. I was never worse off; all my best plants were not in bloom, and some of those that were shown had been kept too close in order to get them in. I had one plant which I regarded as a true sample of my collection. It took the first prize in grey edges; it was small in foliage, but it was a refined plant of Richard Headly. With this exception I had not one plant that pleased me thoroughly, so I write without prejudice.

As to the number of pips, I do not hold with the northern estimate, and think that no plant should have less than five. I am not disposed to limit the number, although I believe that a plant with seven good ones is about the perfection of truss. When they go to eleven or thirteen there are always sure to be defective ones; still, if a truss of that size can be had in which the pips are all correct I quite agree with the dictum that it should have precedence. It is however, I believe, very rare to find it when measured by the strict rules of correct Auricula judging.

I cannot hold with the opinion that the Auricula should be shown with a stake. It is done in the south; I do it myself because others do, but I should be glad that it were dispensed with. It might never be required; and if a truss is top-heavy it may probably be an indication that it had better not be quite so large. We have in our Society made a rule against more than one truss. I fear "An Old Fancier" will, alas! yet see his rule against stakes rejected. Auricula growers in the south will have to be educated to it.

I do not agree with the prejudice that some of the northern growers have against violet or lilac body colour, and where it is associated with other qualities the prejudice ought to be overcome. What more beautiful than a well-bloomed plant of Maria? I know it has a poor tube, but so have many flowers that hold a good place, but what a lovely colour it is! Col. Champneys is without doubt a very striking flower but a very defective one, yet will it always down south throw others into the shade, which, although not so brilliant, are yet more refined. The tube is washy, the colour too deeply laid on, and the pip too cupped; but what a grower it is, and how showy on the home stage! but who for a moment would place it in the same category as George Lightbody, or Richard Headly, or Robert Traill? By-the-by, both Mr. Douglas and Mr. Horner speak of flowers with this blue, lilac, or violet body colour as if they were called by the Lancashire growers *chancy*. I thought it was *chancy*, a corruption of china, used in derision on account of their various colours, like a piece of coloured chinaware.

All these discussions on the subject of the Auricula make me hopeful of a return to the popularity that this flower once enjoyed. It is one which, as I have said, holds a strange fascination over its lovers, and I only wish that they were more numerous down in these southern regions.—D., *Deal*.

AUTUMN-SOWN ONIONS.

What is the best Onion for autumn sowing and early spring use? My attention has been drawn to this subject by Mr. Luckhurst in the Journal, page 404, of May the 27th. It led me to examine my own plot of autumn-sown Onions, which include Globe Tripoli, Flat Tripoli, and last, but not least (this is not the Queen, but still it is a queen in its way, and if I might be allowed I should like to call it Silver Queen), the old Silver-skinned variety, which is usually sown for pickling purposes.

I measured one of the Silver-skinned bulbs, its circumference was 9 inches. The other kinds, comparatively speaking, were not worth any special notice; as a rule they were thick-necked, and the bulbs not very large, so that I did not measure them, but to-day (June 14th) I have done so, and the following is the result:—Globe Tripoli, 8½ inches; Flat Tripoli, 8 inches; and the Silver-skinned, 9½ inches, showing an increase of half an inch since the first measurement. This variety, I think, possesses all the good qualities desirable in an Onion. It is mild in flavour, a quick grower, thin-necked, has a small top, and is perfectly hardy.

I may state that the seeds were sown on the 14th of August, in drills 9 inches apart on a south-west border. I usually transplant in March or April, but this year I did not do so, as the plants came up rather thin in the autumn, and the spring being cold and dry I let them remain in the seed-bed, merely weeding them when they required it. Owing to the late dry weather the Silver-skinned variety is showing signs of ripening and is ready for pulling-up, while the other sorts are still growing, the Globe Tripoli being the worst in the lot, thick-necked and inclined for seeding. I do not know what induced me to sow the Silver-skinned variety in the autumn, but I have done so for the last three years with the same good results. I think this an invaluable variety. I have not seen anything in the market this season to equal it.

I do not know anything of the Queen Onion, but from the description given by Mr. Luckhurst I am quite prepared to believe it to be a good variety.

I may state that in the measurement of the bulbs of the Silver-skinned many of them were so equally balanced in size that there was some difficulty in selecting the largest, while in the other kinds no difficulty was experienced, as large bulbs were few and far between. As the Onion-sowing period is approaching I would advise the old Silver-skinned pickling and the new Silver-skinned Queen to be sown side by side.—G. R. Allis.

BORDER PLANTS—GARLAND FLOWER.

I would direct attention to Daphne cneorum, "Goddess of the Woods or Meadows," as its name implies. If not strictly speaking a spring-blooming plant, it is sometimes seen in flower under favourable circumstances during spring and early summer. It is of trailing habit—a very accommodating evergreen shrub on the rockery or in the border. With care it makes a good edging, and, what is better, if thought desirable it

can remain permanent. It may be turned to good account in various ways, being perfectly hardy. It thrives well in sandy loam and peat in equal quantities, and should have good drainage, yet should not be allowed to suffer for want of water. It is increased by division and layering during the summer. When used as an edging it requires pegging. It may be turned to good account for indoor decoration, and grafted on Daphne Mezereon grown in pots may be made to assume a weeping habit, or any shape the operator pleases. The common Spurge Laurel (Daphne Laureola) may also be used as a stock for grafting on. It might be worth the trouble to graft the three different-coloured Daphnes, Mezereums, and D. cneorum on the same stock. In my mind the white, pink, and nearly crimson, with the evergreen cneorum, would have a very good effect in a cool greenhouse during the winter and early spring, when flowers in many places are none too plentiful.—VERITAS.

THE ARRANGEMENTS OF COLOURS

IN THE BEDS OF THE LONDON PARKS AND GARDENS.—No. 2.

DESIGNS FOR FLOWER AND CARPET BEDDING ON GRASS.

THE circle is the most simple form, and when planted in harmonious proportions and tints is most pleasing. I shall now detail how to plant on the carpet-bedding mode. Various plants, a great proportion of them new, are adopted to show that the Geranium and Calceolaria are not the only candidates for popularity in the summer garden. I admit there are few plants that will look more showy than those named; nevertheless, it is desirable that others of equal brilliancy were more generally made use of. For carpet bedding plants require to be selected not only for their suitable colours but their duration and height.

I have confined myself to low-growing plants, but there is no reason why tall-growing plants should not be used, or annual or perennial flowers, also spring flowers and bulbs. A common plan is to contrast the tints of adjacent blooms, never to let blues stand close to blues nor reds be next to reds; or they might be planted on the principle of blending the colours, four or five rows to consist of various shades of the same colour. Again, a rich effect is obtained by following the order of the prism colours—having all the flowers at one end or side dark purple and violet, and at the other dark reds, the purples to be followed by blues and light porcelains till you come to white. Next the white should follow the yellows, after them pink, then full reds, then dark crimson.

I will now add a small list of annuals which I know are lasting and effective. Annuals are a beautiful and extensive tribe of plants and worthy of the best treatment, and their service is essential in most gardens. I shall therefore make a few remarks on the method of raising and their successful culture—first, hardy annuals, which stand all weathers; second, half-hardy, which can bear no frost; third, tender, which will not thrive in the open air. These divisions, however, run into one another by imperceptible gradations, for several of these rank among tender annuals yet may be planted outdoors during the summer months; and the hardy annuals are the better if treated as half-hardy, so the one treatment will suffice. Besides, transplanting is in most cases an advantage, and secures health and vigour to the plant providing it is properly done. Raise the seedlings upon a gentle hotbed, and when they are strong plants remove them to their destination; but one of the chief points in the cultivation of annuals is to have the seeds germinate well and quickly, and to have the plants into their second leaf. If the seeds are sown the fore part of April they will be ready for the beds the latter end of May; and if it is showery weather when you turn them out the plants will not receive any check. Do not plant them very close, for then their beauty is not seen. I have selected only those which grow compact and which continue long in bloom. As they are to adorn designs their size and habit must be studied. Many of these annuals may be pegged down with advantage, the Phlox Drummondii for instance. When treated this way the beauty of it is much enhanced.

The contrast of colours I shall leave to individual tastes, but I may just repeat that the rules of contrasts and harmonies of colour are derived from Nature. Yellow, red, and blue are contrasts in all their shades, and the tints formed by the union of any two of these form harmonious colours. In the following list the six first-named are foliage plants:—

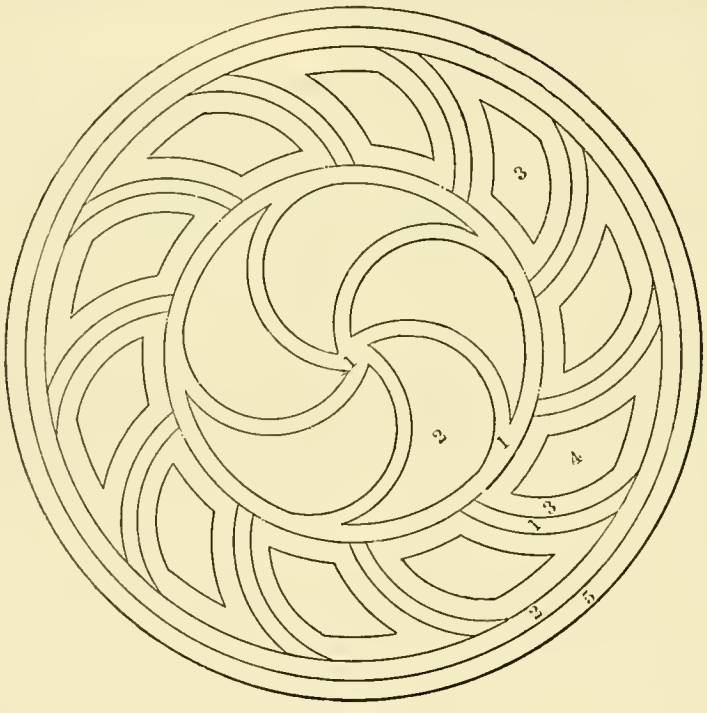


Fig. 113.—BED A.

Amaranthus melancholicus rubar.
Atriplex hortensis rubra. This will require pegging down.
Celosia Huttoni, new, bright crimson and claret colour.
Golden Pyrathrum.
Perilla nankinensis.
Tagetes signata pumila.
Ageratum Imperial Dwarf, blue.
Asperula azurea setosa, blue.
Aloosoa Warscewiczii compacta, scarlet.
Alyssum maritimum, white.
Bartonia aurea, bright yellow
Clarkia alba, white, red, rose, violet.
Convolvulus minor, white, blue, dark violet.
Clintonia pulchella, blue and white.
Eschscholtzia croces, orange and white.
Godetia, rose, purple, white.
Lupinus nanus albus, white.
Marigold, French Miniature, brown and yellow.
Malope grandiflora, crimson, purple, white.
Mesembryanthemum, rose, purple, white.
Nasturtium Tom Thumb, rose, crimson, scarlet, yellow.
Nemesia compacta, blue and white.
Nemophila, purple, white, blue.
Petunia, many colours.
Phlox Drummondii, purple, rose, pink, white, crimson.
Saponaria calabrica, rose, white, pink.
Senecio, crimson, red, purple, white.
Viscaria, scarlet, rose, white, crimson.

BED A.

1. Cineraria maritima compacta. A new and almost pure white, a great improvement on Cineraria maritima. It is nearly hardy, and strikes freely from cuttings at all times.

2. Golden Pyrethrum. It is uniform, neat, and compact, forming an equal surface. Sow the seed in March in a greenhouse or frame, or outdoors on a warm border. Small plants at bedding-out time are better than large plants, as they are not so apt to run to seed as are older plants or cuttings.

3. Lobelia Blue King. A light sky blue and free-flowering variety, constant in bloom until the frosts cut it down. It makes a charming groundwork for bright colours.

4. Alternanthera amœna spectabilis. Of all the new and ornamental-foliage plants for the flower-garden decoration throughout the summer months the Alternantheras are the most useful. It is essential in forming brilliant combinations; its colour, brilliant magenta red, being invaluable for contrasts in designs. It is a marked improvement on A. amœna, brighter in colour and stronger in growth. Propagate in heat in March and April, grow on in heat, shade from the sun, and the greener they are the faster the plants will grow. Let them have air and sun a week before they are planted out, and they

will soon colour and make a fine feature in panel and geometrical groundwork.

5. Echeveria glauca metallica. A very distinct and valuable addition to this class of summer bedding plants. A deep glaucous green with a bronze hue, large showy leaves, free and dwarf grower. Propagated by offsets and seed.

BED B.

1. Golden Pyrethrum.

2. Lobelia Stonei, new, and producing a profusion of dark blue flowers. A very compact and upright-growing variety; a marked improvement on the speciosa section; it is the desideratum in the Lobelia group. Cuttings in March or April make nice plants by the 1st of June. Grow them on in heat the fore part of the time.

3. Alternanthera paronychyoides major, new, orange and carmine. It makes a beautiful contrast with the blue Lobelia. It has proved one of the distinct and attractive bedding plants of the past season, so it can be recommended on its merits; in a word, it is an exceedingly pleasing acquisition.

4. Alternanthera magnifica. Orange and red. We use this sort very extensively in the London parks, and with great success. It is most highly ornamental, and rather a vigorous grower, but still close and compact. This beautiful variety will be found as effective in tone of colour for elegant contrasts as others in the same group.

5. Echeveria secunda glauca. The utility of this plant for bedding purposes is well known—for margins of beds it is extremely effective; indeed, it is one of the most attractive and useful bedding plants in Hyde Park, where there is an immense quantity of it used.

6. Alternanthera amœna. Colour magenta.

7. Stellaria graminea aurea, a new and elegant little golden plant. It is exceedingly useful and ornamental. It is a valuable addition, and is very effective as a margin, and the closer it is kept clipped the brighter it becomes in colour. It is worthy of a place in the most select designs. It is hardy, and may be propagated by pulling it into small pieces. It contrasts beautifully with the grass, and shows the bed to perfection.—N. Cole.

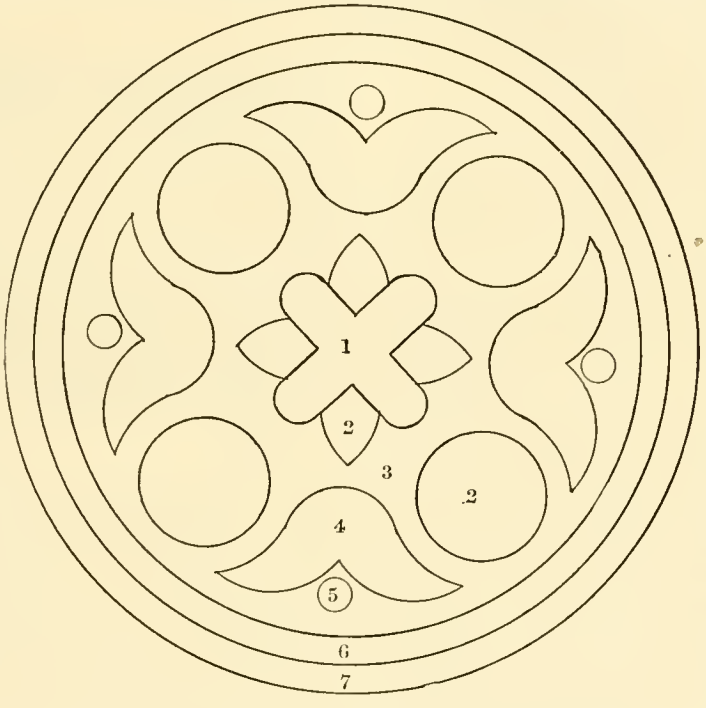


Fig. 114.—Bed B.

IN THE WEST COUNTRIE.—No. 1.

THE EXETER ROSE SHOW.

The first gage in the great tournament of 1875 was thrown down as it is fitting in the fair capital of the west, and right well (notwithstanding the really awful weather of the past week, when storm, and hurricane, and rain seemed to be striving for the mastery), was the contest upheld; and yet it was not a little strange that the only exhibits in the large classes amongst nurserymen came from Slough and Cheshunt, while Exeter, Torquay, and Hereford were unrepresented; and although the first prize amongst amateurs fell to Mr. Baker of Heavitree, yet the second prize was carried off by Mr. Gould of Reading, in the large class. It was indeed a marvel that such flowers could be staged after such weather as we have had. Doubtful indeed must have been the thoughts of the indefatigable Secretary of the Exeter Society when, the day before, rain and sunshine alternated throughout the day, and happy must he have felt as the day broke with a fine clear sky, and a really perfect day for a show day succeeded the stormy and chilly one of Thursday; and as he looked through the tents and saw the trays of bloom that were all ready for the fray, Mr. Gray must have felt that the growers had well supported him in his time of need.

The contest in the nurserymen's class lay between Messrs. Paul & Son and Mr. Charles Turner—close enough in the class for seventy-two, and so close in that for forty-eight trebles that the Judges were compelled, after much hesitation, to place them equal Messrs. Paul & Son's were a more even lot, and Mr. C. Turner's bore the palm in size. In the collection of the former the following were particularly good:—Madame Charles Wood, Dupuy-Jamin, Reynolds Hole, Fisher Holmes, Robert Marnock, Marquise de Castellane, Wilson Saunders, Cheshunt Hybrid, Marguerite de St. Amand, Louis Van Houtte, Prince de Portia, Madame Lacharme, Etienne Levet, Camille Bernardin, M. Hippolyte Jamain, Général Jacqueminot, The Shah, La France, and Thomas Mills. In Mr. Turner's the following were especially fine:—Nardy Frères, La France, Xavier Olibo, Abel Grand, Ferdinand de Lesseps, Devienne Lamy, Monsieur Boncenne, Centifolia Rosea, Senateur Vaisse, Charles Lefebvre, Marie Van Houtte, Mrs. Baker, Madame Lacharme, and Mona. Boncenne. And here let me say that it is my decided conviction that I ought to advise (save that I am a man of peace), my good old friend Lacharme to indict that reverend libeller the Rev. J. B. M. Camm and other offenders for a libel on his wife. No names were too bad for her—"coarse as a navvy," and "dirty as a scullion" (pretty well that, I think, for a mild man), had I not then a grim satisfaction in taking this reverend calumniator by the ear (metaphorically), and bringing him over to these blooms and making him confess that as a white Rose she is utterly unrivalled. It is said she requires fair weather (well, we have not exactly had fair weather lately), and so do other high-prized Roses—Mona. Noman, Mdlle. Eugénie Verdier, and others; yet no one abuses them, no! Madame Lacharme is the best white pot Rose we have, and I would fain believe we have none to equal her for outdoor work. In the class for forty-eight trebles Mr. Turner and Messrs. Paul & Son were, after a very close contest, placed equal first. In Mr. Turner's were good examples of Baronne Rothschild, Devoniensis, Alfred Colomb, Maréchal Niel, Madame Lacharme, without a tigne of blush; Louis Van Houtte, and Etienne Levet. In Mr. Paul's were Marquise de Mortemart, Cheshunt Hybrid, François Michelon, Madame Lacharme, The Shah, Beauty of Waltham, Eugénie Verdier, Reynolds Hole (very good), Senateur Vaisse and Marquise de Castellane.

Amongst amateurs Mr. R. G. N. Baker of Heavitree was pre-eminently first, and some of his blooms could not be surpassed for colour and form. I have never seen, I think, Duke of Edinburgh so thoroughly and intensely scarlet without an atom of shading, while such a box of Charles Lefebvre as he set up I have rarely if ever seen. Among his forty-eights the following were very fine—Madame Caillat, Alfred Colomb, Duke of Edinburgh, Ferdinand de Lesseps, Catherine Mermet, President Thiers, Senateur Vaisse, M. Noman (very fine), Fisher Holmes, Souvenir d'Elise Varden, and Marquise de Mortemart. In his twenty-fours I noticed Madame C. Wood, Baronne Rothschild, Madame Victor Verdier, Duke of Wellington, Marie Van Houtte, Horace Vernet, Marie Baumann, and Souvenir d'un Ami. In the class for eighteen trebles Mr. Baker was again first, amongst others with grand blooms of Mad. Eugénie Verdier, Xavier Olibo, Baronne Rothschild, Marquise de Mortemart, Ferdinand de Lesseps, Duke of Edinburgh, and Lord Macaulay. In the class for twelve Roses of any one sort the first prize was awarded to Mr. Baker for Charles Lefebvre, and the second to Comtesse de Paris, bright crimson rose, unknown to me, but as shown

here was exceedingly bright and good. In the class for new Roses Messrs. Paul & Son were first with Wilson Saunders, very fine; Capitaine Christy, good; Madame Nachury; Ingenieur Madele; François Courtin; Robert Marnock, good; Annie Laxton; Sultan of Zanzibar, good, and as dark as Mons. l'Africane can desire; and Mdlle. Marie Finger, very like Mdlle. Eugénie Verdier. Mr. Turner was second with Jules Favre, Miss Hassard, Oxonian, Warrior, Peach Blossom, Rev. J. B. M. Camm (good), Wm. Gates, Beauty of Thame (dark and fine), J. S. Mill, General Chanzy, and Beauty of Slough, a promising full rose. Want of space compels me to pass over the other classes.

A tent was set apart for Table Decorations, which, as they always are at Exeter, were very good. The prizes were awarded by a lady who has been herself a most successful exhibitor, and yet some of the decisions were much questioned. The first prize for three stands, which was awarded to Miss E. Wish of Broad Clist, was far too large in the base—there would have been room for nothing else on the table; while we thought that had Messrs. Veitch taken away the Anthurium Scherzerianum from the top they would have been far the best. There was one single vase which obtained the second prize, which was charming; it contained some sprays of Spiræa, Rhodanthe, Clerodendron Balfourianum, and some Grasses. The stands of wild flowers were also very good.

The Show was a very successful one, and all who had to do with it may be congratulated on a result which at one time seemed doubtful. For myself I can only tender my hearty thanks to all those brethren in the craft who gave me, as they always do, so kindly a welcome, and make my Exeter trip one of the pleasantest I have in the year.—D., *Deal.*

NEW DISEASE AFFECTING AMERICAN POTATOES.

I, WITH yourselves, regret this disease, though I feel glad that the warning came from the right men in the right place. Early this spring it was fully expected that my position here would have been disturbed, but I took the precaution to rent some garden ground at Old Woodstock, in which to grow and make sure of my new seedling Potatoes. An extra plot also I took to my aid, on purpose to grow the modern Americans, a piece of ground noted for the good products of our English esculents. But about three weeks ago I observed something was going wrong amongst the Yankees. I mentioned this by writing to my chief Potato-cultivating friend who grows them, asking how his were "coming up." The answer was, "fairly well." Now my disagreeable information is that three parts of my American sorts are "gone off," and that just after their appearance above ground, something after the fashion which used to occur in our younger days called "bobbin jones," resulting from heap-storing, frequent spurting and cutting the seed—viz., young shoots struggling just above the soil, then to curl up within, and be seen no more. The present complaint could not be from the cause of "bobbin jones," for I had petted the sets and kept them in single layers in wooden trays, and not a shoot on them was suffered to take any bruise, excepting that I felt compelled to cut what Mr. Radclyffe has christened the "whoppers!" But I dusted lime over their incised surfaces before planting. However, the curling kept on; my men said it must be the continued moulding slightly over head and ears, to guard against night frosts the Americans did not like; but I felt confident it was not that, so about ten days ago I stayed all "fretting" and ordered every shrivelled-foliaged set to be forked up, and at once sowed some Beck's Improved Snowball and Orange Jelly Turnip seed on their sites on the ridges. My surmisings by this procedure were at once clinched, and I await for a further knowledge of the cause from Mr. Berkeley.

The cut sets as dug up were as sound as they well could be, after being some weeks buried within the soil, but the uncut tubers were as sound apparently as when they were planted, so much so that I presented them to my landlord's pigs. But the young shoots? They were withering away, having a brown sere appearance just up to 2 inches from whence they issued from the sets, and tubers. That was the cause of the mischief, But what caused that? At any rate it will prevent me achieving a crop of "whoppers."

The sorts I have this season are Extra Early Vermont, Snowflake, Late Rose, Brownell's Vermont Beauty, Willard's Seedling, and Thorburn's Paragon. Of the crops of my neighbours the freest from the contagion are Bresee's Prolific and Early Rose, two sorts, luckily for them, most in cultivation hereabouts, and I hope all those that mean to die off have done so, though my whole planting of Brownell's Vermont Beauty are looking very uncanny after having arrived at a foot or more in height; even some of the stools of Thorburn's Paragon are dying away, imported seed of this season (?) Bresee's Prolific and Early Rose, being some of the first importation, are *perhaps* acclimatised.

I will write to you again when I have experienced the worst that is likely to happen this season. News has just arrived to me from Banbury that the contagion is there, so I fear we shall hear of its becoming general. I hope and trust our "cousins" will not introduce here their Colorado beetle.

Our English Potatoes about here, including all my new seedlings, are looking unexceptionably well and robust. One of my friends says he is digging Mona's Pride "as big as his fist," and that is none of the smallest. I have not seen them—that is, the big tubers, but his growing crop above ground certainly gives augury for a fine produce, though should the present tempests and the electrical state of the atmosphere continue I shall have to write you ere long to complain about them becoming diseased also, by which you will observe that I still stick to my creed. Well, nothing would give me greater pleasure than to shake "our Editors" by the hand, and to chaperon them over my crops, and a few other things besides Potatoes, which they would feel an interest in should they shape their course this way.—ROBT. FENN.

THIS seems to be prevalent in nearly all parts of the country. I left a bundle of haulm at the office (171, Fleet Street) on the first week in June: some of it was from the gardens at Loxford, and the other portion was brought to me by an amateur. It has appeared here only on the American sorts; a small patch of Extra Early Vermont in the middle of a field has it bad—nearly half destroyed. On the warm sheltered borders it is the same. Myatt's Prolific on one side and Veitch's Royal Ashleaf on the other are sound, while the American is badly diseased. The disease may not be infectious; if it is, it will be a great pity that any of the American varieties were introduced. The experience gained at Loxford is all against them. A high price was paid for Early Rose, and after growing it for two or three seasons it was rejected as a miserable failure. We have now tried what was thought the next best red early sort—the one named above—and it cannot this year be distinguished from Early Rose either in haulm or tuber, and the disease to boot; it will probably go to the pigs like all the rest of them. No more Americans if I can have my way.—J. DOUGLAS.

[Since the announcement made last week we have examined more closely the Potatoes growing, or rather dying, in the gardens of the Royal Horticultural Society at Chiswick. There can be no question but that the disease now established there is exceedingly virulent and destructive, and, like all other new diseases, mysterious. This new disease is not now seen for the first time at Chiswick, and we had no difficulty in recognising its identity with occasional and limited examples of an affection pertaining to the Early Rose which we have seen in different parts of the country during the past two or three years.

We think many cultivators must, in past years, have observed in their vigorous plantations of the variety named a root here and there wither and die. The foliage becomes spotted, the stem discoloured, and in a few days not a vestige of green is left; in fact, to use a familiar term, which is exactly appropriate and expressive, the plants have "damped off." When this occurs, which is commonly the case when the young tubers are just forming, the crop is necessarily ruined, not because the tubers necessarily decay, but because their growth is stopped before they have attained a size fitting them for any useful purpose. Now that (of which isolated instances will have occurred and be in the recollection of those who have cultivated this variety from home-raised seed tubers), is the identical disease which has spread so extensively as practically to destroy the crop at Chiswick.

Mr. Barron might, as a matter of curiosity, have directed attention to the disease existing to a limited extent in previous years, but, as a practical man, he was cautious in raising a feeling of alarm, and wisely waited for evidence. This evidence is now forthcoming, and proves beyond any manner of doubt that the American varieties of Potatoes grown from home-raised or English seed are specially liable to a visitation which may, as instances at Chiswick prove, render the crop worthless. The information we gave was not a moment too soon, for the disease is an established fact, not as a pathological

discovery merely, but as a destructive agent jeopardising the crop of a valuable esculent.

At Chiswick we note three distinct circumstances—viz., First, that the disease is extensive; second, that English varieties are perfectly free; and third, that it is nowhere present in the crops of American varieties from imported seed.

The disease is not in one part of the garden alone, but in every part where American varieties are grown. In one quarter we find rows of Regents, every plant of which is in perfect health, and the next row of Early Rose is practically ruined. Some roots are fresh enough, but for twenty roots together decay of the haulm is complete. On another border which is devoted to the trial of several kinds, we find amidst Mr. Fenn's seedlings (which are uniformly healthy and in a high degree promising), six rows of American Snowflake with ten sets in each row. Out of these sixty sets there are just six healthy plants, the rest not being slightly affected, but the haulm absolutely decayed and the produce worthless. Again, we find rows of American Breadfruit, imported seed supplied by Messrs. Carter & Co., perfectly healthy, and Snowflake by their side from English seed extensively diseased. The disease is thus limited to American varieties from English seed, the garden affording no instance of an English variety being affected, nor yet an American variety from imported seed.

Having noticed the incidence and peculiarities of the disease we glance at its characteristics. So far as we could see, the main—visible—seat of the malady is the stem of the plant just at or very slightly within the surface of the soil. It is best explained by the perfect analogy afforded by a decayed post; above ground it is sound, and below sound, but between these points it is decayed.

Out of dozens of stems we pulled up not one of them but was most affected at the point named. Some were absolutely rotten, and affording a feeding ground for grubs and fungi; while others only slightly affected were merely discoloured and partly shrivelled, precisely and exactly as are plants which are "damping" or "fogging off." The old sets of some were perfectly sound and healthy, and were even pushing out fresh growth; and some of the stems which above ground were rotten, below it were pushing fresh white rootlets. Is the fungus which takes possession of the plants the cause or the effect of the disease? That is an important point to determine; but taking a practical rather than a scientific view of the case, we cannot suppose it to be the cause. That, however, is the subject of special investigation.

The disease is distinct from the old murrain in appearance, and also in being affected by weather influences. The old disease spreads most rapidly with rain; the new increased the most quickly under the late dry sunny weather. Since the rains the progress of the malady has been slower, and the plants are generally more healthy and show fewer fresh outbreaks. It would appear that the real seat of the disease is in the seed tuber, and that when once acquired it is hereditary. Certain it is that in instances more or less frequent it has exhibited itself during the past few years, and, unfortunately, not much less certainly is it increasing in virulency. At Chiswick it is unquestionably severe, and the warning we have given is no hurried note of alarm, but a timely notice of an established outbreak. All the American varieties from English seed are affected except Alpha.

Although at Chiswick none of the crop growing from imported seed is attacked, Mr. Fenn's experience proves that such seed is not invulnerable to the inroads of the disease.—Eds.]

ROYAL HORTICULTURAL SOCIETY.

On the 16th there was a meeting of some of the Fellows at the Charing Cross Hotel, "to consider the present position and prospects of the Society." Mr. A. F. Godson, the Chairman, said the object was to prepare a practical scheme to extricate the Society from its difficulties. Mr. Shirley Hibberd said the Fellows could not sell their land, and they had no available assets. The arrangement must provide for existing covenants, to perform all duties prescribed by the charter, to make the best of the lease, the best of the Society's relations with the Commissioners of the Exhibition of 1862, and the very best of the local Fellows. To reconstruct the Society on a sound basis the London garden must be kept in the most perfect condition possible, and improvements should be made in the gardens by which the expenditure would amount to £17,000 per year. The subscriptions for the Fellows residing within a mile of the gardens at Kensington should be £10 10*s.* annually. The raising of the subscriptions would tend to enhance the value of the attractions by restricting the enjoyment of them to a select company. He believed this would raise the Society's income from subscriptions of Fellows alone to £20,000, which would leave something for the redemption of the debenture debt. Assuming that only 1000 Fellows joined at £10 10*s.* it would realise 10,000 guineas. The exhibitions, life compositions, admissions to the gardens, and miscellaneous receipts would bring the income up to £20,000, and, as the working expenses would be £17,000, there would be a balance of £3000 to pay off the debt. He moved, "That in any scheme which may be promoted with a view to the restoration of the Royal Horticultural Society to its original high position, the annual subscription of Fellows within one mile of the gardens at South Kensington should be fixed at a *minimum* rate of ten guineas, and that the Fellows' tickets should be used only by resident members of the families of Fellows." Mr. R. Dean, Dr. Denny, Mr. P. Barr, Mr. D. Wooster, and others addressed the meeting, and a general opinion was expressed that the failure of the Society was mainly due to bad management, caused by dissensions in the Council. The resolution was then carried, and it was decided that it be forwarded to the Council of the Society.

GROS GUILLAUME VINE.

Mr. Abbey is perfectly justified, according to his own experience with this fine Grape, in differing from me in common with the author of the "Fruit Manual" and Mr. Luckhurst, as to its being a shy bearer under the orthodox system of short-spur-pruning. With Mr. Abbey it has fruited freely under that treatment, and perhaps it may continue to do so, and—perhaps not. For the first few years of a Vine's life the orthodox form of close pruning is permissible with any variety, for so long as there is a yearly extension of cane which has not to be cut away, the system of cutting-in the side growths can hardly be called "close pruning." It is when there can be no further extension, but when every shoot, including the terminal one, is cut to within half an inch of the previous year's wood, that Gros Guillaume is so often shy in producing fruit, while other varieties yield Grapes in the greatest perfection.

Notwithstanding Mr. Abbey's experience to the contrary, I am of opinion that the shyness of the Grape in question under the common mode of pruning is to be attributed its absence from nine-tenths of the vineries in the country. If it is not generally shy why this significant absence? It cannot be that its quality is either inferior or its appearance anything approaching to poor, for to the eye it is fine and to the palate agreeable. For a few years it is common for this Grape to bear well, but after the Vine has filled its allotted space and close pruning in its integrity is carried out, then it is that failure has been so common as practically to banish it from many establishments. Had it been really a free bearer under the ordinary system of pruning its other good qualities must have ensured its increase; it would, like the Black Hamburgh, Alicante, and Lady Downe's Seedling, have been planted as a staple variety, whereas the rule is to limit its culture to a Vine or two in a place, just to "keep the sort."

The author of the "Fruit Manual" says the Vine is "a bad bearer except on poor soils," which amounts to this—that in ordinary soils it is of gross habit, and hence must not be mutilated so violently as those of moderate growth. Mr. Luckhurst has found that to be true. So have I. I have found the Vine to bear freely for half a dozen years, and then to cease showing fruit. I have seen it year after year under the hard pruning practically barren, and subsequently on affording it more room and an extension of cane again become satisfactorily fruitful.

I had last year opportunities, in at the least twenty instances, of seeing this Grape grown, but only in one place was it really satisfactory and relied on as the staple late Grape; and this case afforded a striking proof of the soundness of Mr. Luckhurst's views and my confirmation of them. There were twenty Vines in the same house and border, and of the same age. Some of these Vines and some parts of the others had been pruned closely in to the old wood, the rest and other portions being furnished with canes laid in thinly from the previous year's growth. The advantage of the long pruning was overwhelming, for there alone were the grand Grapes. I have experienced precisely the same results, hence it was that I was

glad to see Mr. Luckhurst treat of this fine Grape in, as I believe, so sound a manner.

I think I am right in regarding Mr. Abbey's success as an exceptional circumstance, and not to be laid down as a rule, that Gros Guillaume is as free as other varieties of Grapes under the ordinary system of culture. A local example or two of success does not in my opinion prove this Grape to be a prolific and generally free bearer any more than Mr. Hunter's honourable triumph proves that a general characteristic of the Black Hamburgh is the production of Brobdignagian bunches. I am glad the subject has cropped-up, especially if it results in a good Grape being better grown, as I think it might, by a relaxation of the orthodox rule of hard close pruning.—A Northern Gardener.

FORGET-ME-NOTS FOR SPRING GARDENING.

Very common is it for cultivators and admiring on-lookers to descant on the merits of these charming spring flowers when the beds and borders are made gay with them in their blooming period. When it is seen how effective they are many owners of gardens who have them not decide upon procuring them. That is one period when we hear much of the merits of Forget-me-nots, and the next period is in the autumn when summer flowers are waning, and when something must be found to take their place. But between these two periods these beautiful hardy spring flowers are seldom noticed; probably because summer flowers then absorb attention. Yet the period when Forget-me-nots are not to be seen—just after they have done their work and the plants are removed from the beds—is the most important of all times at which to direct attention to the usefulness of this attractive family of plants.

To enjoy them in fullest beauty in the early months of spring we must commence our preparations at midsummer. Because this is a busy period attention to these plants is too often postponed—preparations are commenced too late, and the plants are small in the autumn, and the bloom in the beds in the spring both late and unsatisfying.

If the seed is sown late the bloom is both late and weakly, and this is the position of, perhaps, nine-tenths of those who attempt to grow Forget-me-nots. Even in gardens where spring flowers are really desired and are specially welcomed, the practice is common to dib-in small plants from seed which had been sown late, and which is not doing justice to the plants themselves, and is also calculated to bring spring gardening into disrepute.

The few who grow these plants in the finest perfection in the spring are at the present time sowing the seed or dividing the plants. It is only by sowing the seed now that good plants can be had in the autumn of a size sufficient to produce an early and a fine display in the spring. Instead of the small seedlings which are set with the dibber we must have dense stocky plants 6 inches in diameter, and which will take up with a ball that can hardly be crammed into a 5-inch pot. Those are the plants to satisfy either for indoor or outdoor decoration. It is impossible to have them by the too common mode of seed-sowing in August. Such plants can be had by sowing the seed at the present time.

Take, for instance, the Myosotis dissitiflora, and what have we more attractive for indoor decoration in February and March, and for garden decoration in April and May, than well-grown plants of this fine Forget-me-not? Hardly anything can be more charming; but late-sown and weakly-grown plants are always disappointing. Whether M. arvensis, M. sylvatica with their white varieties are used, or the best of all the blues, M. dissitiflora, the seed must be sown at the present time. A moist shady border is the best place where to sow the seed and also to prick out the plants to grow on until they are required for the beds.

A portion of these plants if potted and brought on in a light greenhouse will make a beautiful display in the early days of spring. Plants which have bloomed may also be cut down and divided. If in a moist place they grow rapidly, and should be again divided towards the autumn, for very large plants do not flower well, as the central crowns are apt to be weak. But whether by root-division or by seed, it is an easy matter for all who choose to do so to have a supply of these charming spring-flowering plants in the best condition, providing the work of preparation is commenced at once.

Seed-sowing in June, a cool place for growth in summer, with room for each plant to develops itself and an abundance of water at all times, and especially as the flowering period approaches, are the principal requirements to have Forget-me-nots in perfection.—J., *Clapham.*

LATE-KEEPING GRAPES.

I have now growing in one house three varieties of late Grapes, two Vines of Black Alicante, four of Lady Downe's Seedling, and two of Mrs. Pince's Muscat. At this time (June 16th), Lady Downe's Seedling is scalding very much and has small bunches. The Black Alicante has very fine bunches, and to all appearance are likely to be a very fine crop, but they have not a good flavour when ripe, being washy and soft. Mrs. Pince has the finest bunches and has set the berries as freely as a Black Hamburgh. The berries are very fine. I find that to bring it to a good colour it is necessary to use some heat in the spring and to have it ripe before the autumn. As for flavour, neither Lady Downe's Seedling nor the Black Alicante are nearly so good.

I should recommend anyone making a new border to use plenty of bones, charcoal, and some rich turf mixed with lime rubbish and broken bricks. A border 18 feet wide, I should give 9 feet furthest from the roots plenty of good spit manure, let it lie a twelvemonth, and then turn it over and give the border a good dressing. The roots the second year will find the benefit of it. This I have done, and find it to produce fine healthy canes.

I find the Grapes of Mrs. Pince keep the best of the three. —T. L.

THE ROYAL HORTICULTURAL SOCIETY.

Permit me through the columns of your Journal to point out to those of your readers who are Fellows of the Royal Horticultural Society, the baneful effect of the Parthian shot of Lord Bury at the last adjourned general meeting of the Society. If Lord Bury's reiterated recommendation to divide the Society into South Kensingtonians and horticulturists be carried out, then this Royal Society will soon dwindle down into utter insignificance. One reason why the horticulturists consented to occupy the South Kensington ground was because Chiswick had been found too far from town, and now the advice is to go back to a place that has been reduced one-half its size, and that half the most attractive one. Another and a special reason for coming to the present site was to afford an opportunity to a much larger number of people to take an interest in horticulture as a science, instead of being mere lovers of flowers. As no learned society can be supported by its scientific members alone, it becomes necessary to attract as well as instruct the unscientific public, and for our science no spot could be better suited than South Kensington; but if these beautiful gardens are to become a mere square and nursery for the surrounding housee, then as one of the public I say the Royal Commissioners would not be justified in retaining so valuable a building site for such a purpose, and I should consider it my duty to instruct the members for the county to inquire why such property should not be applied to scientific purposes, and so benefit the whole of the people instead of a few.

Had we a good and an organising brain at the head, this science of horticulture, which is most useful to mankind, would very soon find itself in a most flourishing position; for not only would it be well supported by the London world, but Fellows out of every town and county would come forward to help our well-loved science, and £20,000 a-year would be more easily raised than the present income of £6000.—A Country Fellow and an Amateur Horticulturist.

POROUS GARDEN POTS.

I venture to detail a few items of my experience, having used porous pots for a considerable time for greenhouse plants from the thumb-pot up to the 12-inch. They are so porous that before potting I put them into water to saturate them if they have not been used before or have been stored some time. After being washed clean I find I can grow any greenhouse plant in them tolerably well. Fuchsia and Geranium leaves large and healthy, trusses good. Balsams and Tomatoes most splendid in 9-inch pots. Indian Corn from 10 to 12 feet high in 9-inch pots, with beautiful corn cobs. Hyacinths, Tulips, Ixias, and Liliums, Rhododendrous, Azaleas, &c.—in fact, anything I put into them seems to thrive.

My idea of a porous pot is that when a plant in it is watered the pot absorbs much of the water and gives it out again,

when the soil begins to become dry. I also find the fibres adhering to the inside of a porous pot more than to that of a non-porous pot; also a plant potbound in one of them will be better in health than in a non-porous pot, for the fibres will suck the moisture of the atmosphere through the pores of a porous pot condensed on the outside. I also find cuttings strike more freely in them than in a non-porous pot; they also hold out longer when dry, and a plant is not so soon injured in them as in non-porous pots. Further, I never find the soil become sour in them if overwatered by an inexperienced hand.

I shall be glad if anyone using porous or non-porous pots would state their experience.—J. McAfee, *Gardener, Ireland.*

CYTISUS ADAMI.

It seems strange that in the numbers of June 12th of the *Gardener's Chronicle* and of *Sieboldia* (a Dutch horticultural paper, edited by Mr. H. Witte, Curator of the Botanic Gardens at Leyden), notes are inserted about the same subject—Cytisus Adami. In both papers it is mentioned that on Cytisus Adami both yellow and violet spikes can be seen, and, which is more curious still, that both violet and yellow flowers may be observed on the same spike. Some of your readers may be interested to hear that the latter fact has recently been seen in Mr. R. J. Blaann's garden at Zuidbroek, Netherlands.

Flower spikes of Cytisus Adami have been observed producing both yellow and violet flowers. Mr. Blaann sent one of those spikes to Mr. Witte, who says the following about it in *Sieboldia*:—"The spike which lays now before us is not one of the largest, and already shows by its development to keep a medium between the spikes of Cytisus Laburnum and C. purpureus. It bears fifteen flowers. Examining them from the base of the spike, they are arranged in the following order:—

1 yellow flower	1 violet flower	1 yellow flower
2 violet ,,	2 yellow ,,	1 violet ,,
1 yellow ,,	1 violet ,,	5 yellow ,,

Consequently we find five violet and ten yellow flowers. This fact is so striking that one can scarcely believe it. We do not now again mention the origin of this tree, on which so much has been written. A clear explanation of this fact is until now always a wish which very likely will not be so soon accomplished. For the present we content ourselves with this note, thanking Mr. Blaann very much for his kindness in sending the spike."—A. M. C. Jongkindt Coninck, *Tottenham Nurseries, Dedemsvaart, near Zwolle, Netherlands.*

NEW BOOKS.

The Potato Disease, &c. By Eccles Haigh. G. Philip & Son, Fleet Street, London.

We fail to discern anything novel in this pamphlet, and our readers may judge for themselves when we quote the following as embodying Mr. Haigh's opinion as to preventing the disease:—

"Regenerate through the seed two or three times, and abstain, as nearly as practicable, not only from nitrogenous artificial manures, such as guano, sulphate of ammonia, rape-cake, and nitrate of soda, but also from strong farmyard manure, such as stable manure and that produced by cattle fattened on such food as oil-cake; that furnished from dairy establishments and cow byres approaches to the type of what I would recommend."

Compendious Statement of the Nature and Cost of Certain Sewage Processes. By Major-General Scott, C.B. Scott's Sewage Company, 26, Great George Street, Westminster.

So strongly do we feel convinced from long experience of the vast fertilising power of house sewage that we have published more than one work on the subject, and recommend strongly General Scott's pamphlet to our readers.

EARLY WRITERS ON ENGLISH GARDENING.

No. 5.

JOHN PARKINSON.

Usually, but very undeservedly, our early herbalists are ridiculed, and their researches called "old women's lore." Quite the reverse is my estimate of them and their labours; and all gardeners ought to coincide with me, for the herbalists of the sixteenth and seventeenth centuries were the men who first largely introduced plants worthy of cultivation in our gardens. It is true that they travelled far, and examined them sedulously to obtain from them medicinal aid. In that also they were marvellously successful; but they learned to admire the plants and to cultivate them for their beauty, and they imparted them to others who coveted them only for their beauty.

Prominent among these herbalist-gardeners was John Parkinson. He was born in 1567, for the inscription on his portrait, published in 1629, states that he was then in his sixty-second year—"LXII ætatis annum agentis."

The place of his nativity is not known, but Nottinghamshire was probably the county, for thither towards the close of life it has been stated he travelled to recruit and renovate his strength for his professional duties as an apothecary. There is no room for doubting that Parkinson resided in the parish of St. Martin-in-the-Fields. In his "Theatrum Botanicum" he very frequently speaks of plants that were growing in his "garden here in London," and that it was in Long Acre. Among the State Papers of the time of Charles II. there is a petition dated in September, 1660, from John Chase, His Majesty's apothecary, for a lease, on rental of 20*s.*, of a small parcel of land next the Tennis Court in St. James's Fields, granted by the late King to John Parkinson, his botanist, as a garden for plants, toward the enclosing of which and erecting a house there the petitioner's father advanced £100, on condition of being joined with Parkinson in the grant, but was prevented by the civil war troubles. Now Long Acre and St. James's Fields were both in the parish of St. Martin's. The latter were westward of its church, and were not made a part of the parish now known as St. James's Piccadilly until 1684. Long Acre was not so called previously to 1612, when building had reduced it to a long narrow slip. It had been a much larger vacant space, earlier known as Seven Acres and The Elms. In his "Paradisus" he tells that he had spent nearly forty years in "travell," or as we now spell it "travail," to acquire a knowledge of plants, and, not satisfied with his own researches, he contributed to the expenses of one botanist to enable him to search some parts of Europe for new plants. Parkinson was reasonably displeased with him. The offender was Guillaume Boel, who, says Parkinson, "going into Spaine almost wholly on my charge brought me little else for my money than seeds of Chiceling Peas." Yet he gave seeds to others, so that "I beate the bushe and another catcheth and eateth the bird."

The vicinity, the northern bank of the river, seems to have been long preferred for garden grounds. Even in Domesday Book a vineyard belonging to the King is mentioned as situated in Holborn, and in the period we are now considering we have, in a line along the same elevation Johnson's physic garden on Snow Hill, Gerarde's in Holborn, and Parkinson's in Long Acre. Those gardens were enriched by contributions from our merchants and gentry, several of whom are immortalised in the pages of those three herbalists as lovers and collectors of plants. The following extracts record some of those who thus benefited Parkinson:—

"Mr. Nicholas Lete, a worthy merchant and a lover of all faire flowers."

"Mr. John de Franqueville imparted to me many good things."

"Mr. John Gordier (Goodyer), a great lover and curious searcher of plants, who hath found in our countrey many plants not imagined to grow in our land. I wish there were many more of his minde, that not hindering their affaires at spare times would be industrious to search out and know what the ground bringeth forth where their occasions are to be."

Of the Sea Pea he says that Dr. John Argent brought a whole plant from Lincolnshire, and "gave it to Dr. Lobel in his lifetime to be inserted in his workes, but he, prevented by death, failing to performe it, I have by purchasing his works with my money here supplied."

The desire for new plants and fruits was not confined to men of science and merchants, and one instance is Richard Brown, writing from Paris to Secretary Dorchester in 1631, tells him how he purposes spending the £300 for fruit trees for him, chiefly Pears, Nectarines, and Grapes. Among the Pears are the Summer and Winter Bon Chrétien, Bergamotte, Messeur Jean, Rousselet, and de Beurré. Among the Nectarines the Alberge, Peche cerise, Violette, Blane and Jaune. —(*Col. of State Papers.* Bruce.)

Notwithstanding his pre-eminence as a botanist and his intercourse with the encouragers of science who were his contemporaries, no letters from or to him are known to be in existence, nor any relative MSS. either in the British Museum or Lambeth or Bodleian libraries. I have searched them, but in vain.

The profession of apothecary and herbalist does not seem to have been in those days either honoured or lucrative, as there is no record of correspondence with men of position, nor of a will being proved, or of letters of administration being obtained by the representatives of either Gerarde or Parkinson.

I will now proceed to notice the two publications by which Parkinson is so favourably remembered. Most of my readers will have failed to observe that in the title of the first of those works, *Paradisus in Sole*, is intended a witty translation of Parkinson—Park-in-sun. I will copy fully the title-page because it tells the contents of the work, and the volume has this transcendant merit, it is the first original work on English gardening. The details are full, are the records of the author's practice, and in every department impart sound instruction.

"PARADISI IN SOLE.

"PARADISUS TERRESTRIS.

"A garden of all sorts of pleasant flowers which our English ayre will permitt to be noursed up: with a Kitchen Garden of all manner of herbes, rootes, and fruites for meate or sause used with us, and an Orchard of all sorte of fruit-bearing trees and shrubbes fit for our land, together with the right orderinge, planting, and preserving of them, and their uses and vertues. Collected by John Parkinson, Apothecary of London. 1629."

Fig. 115.—JOHN PARKINSON.

The frontispiece represents the garden of Eden. Adam seems to have gathered the last fruit from a tree, and Eve is attending to some flower. In the foreground is more than one Sunflower, but Tulips, Martagon Lilies, Cyclamens, the Pine Apple, and Carnation are conspicuous. It is dedicated to the Queen, evidently Henrietta Maria, whom he knew "delighted with all the faire flowers of a garden." The address to the reader demonstrates that Parkinson was a well-educated and well-thinking man. "Some through an evill disposition and ignorance have so far traduced me as to say this was rather another man's worke than mine owne, but I leave them to their folly." He adds that he always had "a naturall inclination" to such pursuits, and evidently was referring to the "Herbal" he subsequently published when he says that he has a work "larger, as time may suddenly, by God's permission, bring to light." If the work was successful it would "hasten the fourth part—a Garden of Simples, which will be quiet no longer at home then that it can bring its master newes of faire weather for the journey." That weather came in 1640.

He recommends Box as an edging, as yet "only received into the gardens of those that are curious." He denied the moon's influence over garden operations, for, after many experiments, "I could never see the effect desired." So grafting the Rose on the Broom to obtain yellow flowers, and many other follies, he firmly adds, "I assure you they are all mere idle tales and fancies." "I have of Roses to furnish this garden thirty sorts at the least, every one notably different from the other both for colour, form, and smell." They were—1, White English Rose, single and double; 2, Carnation Rose, pale blush and very double; 3, English Red Rose, "more frequent used in England than in other places;" 4, Damaske Rose, "of most excellent sweet pleasant sent;" 5, Great Double Damaske Province or Holland Rose, "that some call Centifolia incarnata;" 6, Red Province Rose, "called Centifolia rubra;" 7, White Province Rose, "whereof I am not oculatus testis;" 8, Party-coloured Rose, "of some York and Lancaster;" 9, Chrystall Rose, striped as "the Chrystall Gilloflower," dark stripes on pale ground; 10, Dwarf Red or Gilloflower Rose; 11, Franckford Rose, pale red; 12, Hungarian Rose, pale red; 13, Velvet Rose, single and double, "like unto crimson velvet;" 14, Rose without Thornes, single and double, pale red; 15, Cinamon Rose, single and double, pale red, with "small sent of Cinamon;" 16, Single Yellow Rose; 17, Double Yellow Rose, "few abiding whole and fair in our countrey, the cause whereof wee do imagine to bee the much moisture of our countrey;" 18, Muske Rose, single and double, "creame colour;" 19, Double White Damaske Muske Rose; 20, Spanish Muske Rose, white with a blush; 21, Great Apple Rose, deep blush; 22, Single Eglantine or Sweet Briar bush; 23, Double Eglantine; 24, Evergreen Rose, white, "of a fine sent; leaves abide for the most part all the winter."

"Gilloflowers" were then "the pride of our English gardens." Of Tulips he had 160 varieties, and "scarce any lady of worth but was a delighter in them."

In the Kitchen Garden he gives full and correct directions; but many observations, such as that Cabbages were eaten chiefly by "the poorer sort of people," are evidence that animal rather than vegetable diet prevailed. He has the merit of having introduced the Rhubarb plant, it being sent to him "from beyond sea by Mr. D. Matthew Lister." In the Fruit Garden he gives good directions for the culture and propagation of all the species now its tenants, but want of space prevents me making more than this extract, "Nectarines have not been with us many years." Although he dedicated the volume to the Queen he did not accept the Roman Catholic faith, for he condemns most strongly its priests for their false statements about the Passion-flower.

In 1656, six years after Parkinson's death, a second edition of the "Paradisus," "much corrected and enlarged," was published. After the lapse of eleven years his principal and only other work was published entitled, "Theatrum Botanicum: the Theater of Plants, or an Herball of a large extent." The title-page states much more of what the pages contain—"Collected by the many yeares travaile, industry, and experience in this subject, by John Parkinson, Apothecary of London, and the Kings Herbarist. Published by the Kings Majestyes especiall priviledge." 1640. He dedicated "this manlike worke of herbes and plants" to the king, as he formerly did "a feminine of flowers" to the queen. The civil wars, or, as in the preface he terms them, "the disastrous times, but much more wretched and perverse men" had hindered the publication. It "hath changed the note" and certainly increased its value, for instead of "a Physicale Garden of Simples" it was now "a Theater of Plants."

Parkinson wrote unjustly when he expressed himself sneeringly about "Master Johnson" for hastening to edit a new edition of Gerarde's Herbal. The work was needed, and Parkinson tells us that he should have published his "Theatrum Botanicum" at the same period had not the civil wars interfered. Johnson, writing in 1633, speaks more generously, saying, "Mr. John Parkinson, an apothecarie of this city (yet living and labouring for the common good) hath not superficially handled these things."

The contents of the "Theatrum," being entirely botanical, I will not detail, but I cannot resist quoting one sentence. In speaking of one of our native plants he says it grows "on the backeside of Grayes Inne, where Mr. Lambe's Conduit heade standeth." We here see the derivation of the name of that well-known street.

Writing in the April of 1640 Dr. Mayerne mentions that the king had recently made Parkinson "Chief Royal Herbalist," and this is the latest notice of him that I have met with previous to the record of his death. The register of burials in the parish of St. Martin-in-the-Fields contains this entry—"1650, Aug. 6, John Parkinson sepultus." Guided by the inscription on his portrait we thus learn that his death occurred in his eighty-third year.

During the Protectorate I find no notice of him, but among the State Papers of the date of May, 1660, there is an order for a grant to Dr. Robert Morison of the offices of botanical physician and chief herbalist to the king (Charles II.), in the place of Matthias de Lobell and John Parkinson, with the

physical garden in St. James's Fields for medicinal plants; also of overseer, director, and gardener of Hampton Court and the privy gardens at St. James's.

TREE FERNS.

This is a family of plants of undeniable beauty, and which contribute a distinct effect to any suitable structure in which they are cultivated. The New Zealand species of these fine Ferns cannot be too highly prized, as they combine with a decidedly tropical appearance the power to flourish in a cool temperature. This is a great advantage, for while it was thought necessary to provide a high stove temperature to enable tree Ferns to flourish, it was practically to debar many from attempting their culture; but since some of the species are found to be comparatively hardy, they supply a want in occupying space ornamentally in many cool conservatories.

It cannot be denied that in many structures devoted to the display of plants a special want is often felt. Plants on stages are arranged in flat formality, and which at first are imposing by their massiveness, but a desire for a more cool, quiet, and natural form of ornamentation is eventually felt. Smooth banks of flowers, globular Camellias, and stately Azaleas are beautiful, but are infinitely more effective if, springing from among them and towering aloft, are stately Palms and towering tree Ferns. In lofty conservatories there is a blank of unoccupied space between the climbing plants drooping from the roof and the flowering plants arranged on the ground or on stages which detracts from the furnishing of the structure. To supply this deficiency tree Ferns are admirably adapted. To appreciate the satisfying effect which is created by these noble plants, we have only to witness the well-arranged public exhibitions in which tree Ferns are used. These plants judiciously interspersed tone the overpowering sense of brightness of long banks of flowers, and relieve the monotony inseparable from the grouping of flowering plants alone.

Fig. 116.—Alsophila leichardtiana.

The time will come when the conservatory will not be composed of geometrical beds and longitudinal stages wherein and whereon plants are arranged to form a dense close mass having the main object to dazzle, but rather a free plantation of tropical aspect will be sought for, and which will afford a roomy promenade beneath cool canopies of foliage which only Palms and tree Ferns can provide. These stately plants carefully disposed, and brighter examples of decorative plants arranged in natural freedom at their base, will be the occupants, and the mode of associating them that will be recognised as the most suitable mode on which to furnish a conservatory.

The day of mere glare has passed its meridian, and the taste of the times is every day becoming more refined. Tree Ferns and kindred plants tower high above mere fashion, and their merits are being recognised, and they will be more esteemed in the future than they have been in the past. It is also satisfactory to notice, that as the taste is being moulded to appreciate more fully the grace of plants, so in the same proportion are these plants being provided. Trade enterprise in a great commercial country like ours will always expand with public demands, and experience is teaching—indeed has already taught, the best mode and time of importation of those plants from distant lands.

That tree Ferns are costly in comparison with a Pelargonium is a necessity, but each year as consignments of "trunks," as the dormant plants are expressively designated, are arriving in greater numbers and in better condition, so are they offered on less costly terms than heretofore. But the real question is not what a plant costs, but, Is it worth that cost? There is a cardinal difference to be borne in mind in assessing the value of a Pelargonium and a tree Fern. The former may be worth two guineas one year, but what is it worth the next? It necessarily declines in public estimation, becomes common and devoid of interest. It is not so with such plants as tree Ferns. These increase in interest, beauty, and worth with time and cultivation. These are plants which command admiration and attention, and their extended culture is worthy of being recommended. In the furnishing of conservatories they should never be lost sight of; their noble, elegant, and refreshing appearance contributing a feature for which there is no substitute. How many structures do we enter in which we involuntarily feel that to make them thoroughly enjoyable towering Ferns and Palms are the great desiderata?

The merits of these plants are not fully recognised, or, at any rate, their cultivation is injudiciously limited. Their first cost is now by no means ruinous, and there is nothing intricate or difficult in their cultivation. They demand no great yearly outlay in coals to preserve them in health; but good soil, pure water, and a pleasant genial temperature embrace all their requirements—that is, those species which are indigenous to temperate climes; those from warmer latitudes, of course, requiring special structures, of which they are emphatically worthy, and in which a collection has a grand effect. They may be either grown in pots or tubs or planted-out, and there are few conservatories wherein one or more pairs of these plants would not add greatly to their beauty.

Some of the temperate-zoned species which are distinct and moderate in price are Dicksonias antarctica and squarrosa; Alsophilas australis, excelsa, and Leichardtiana; Cyatheas dealbata, Smithii, and princeps.

Other distinct, rare, and beautiful species there are, both for temperate and tropical temperatures, which it is not necessary to enumerate. The above are only named as typical of these plants, and the figure we publish does not so much

convey an adequate and correct idea of a species as it demonstrates by a characteristic habit of growth how eminently suited are these plants for various positions and purposes of decoration.

A soil composed of turfy loam, peat, and silver sand, a sufficiency of moisture at the root and in the atmosphere, with moderate shade and a minimum temperatnre of 45°, are the requisites of the temperate species; those from tropical latitudes requiring a minimum winter temperature of 60°, with a corresponding increase in both cases during the summer months. The whole of the species are of easy culture.—W.

IRIS GERMANICA.

On page 237 I read an interesting article on this old and beautiful garden flower. Until then I was not aware what a rich variety there is in cultivation. German Irises have been exceedingly fine this year. I have seen them flowering profusely under trees in poor soil, and immense clumps in shrubbery borders. I have seen their bright heads adding cheerfulness to churchyards, and for the past month they have been the brightest of all flowers in cottagers' gardens. They seem, in fact, to flourish anywhere, in town or in country, in rich soil or poor, in sun or in shade. For cut flowers nothing can be more suitable, and this brings me to what I have to say.

Being in London recently I saw a splendid collection of thirty varieties in the Central Avenue of Covent Garden Market. Surely every tint and colour to be found in flowers were blended in that box of blooms—blues, pinks, crimsons in every shade, with yellow and white in purity and clearness. The reticulations of these flowers were most chaste, and the delicacy of the pencilling on many of them was exquisite. Of course I shall have some of them, as I find they are offered at a reasonable price. But why are not these flowers advertised? I never see them offered anywhere, and my neighbours, of whom I have inquired, were as ignorant about them as myself. There is much ado made of flowers of less beauty. When once the distinct and splendid varieties of this fine old garden flower are known they cannot fail to be inquired after and cultivated in many gardens where they have now no place.

While I can enjoy beautiful examples of bedded-out flower gardens as well as anyone, I am still glad to see that increased attention is being given to our hardy flowers, and amongst them few are finer than these Irises, and few are less understood than are their diversified beauties and advantages.—A Countryman.

PORTRAITS of PLANTS, FLOWERS, and FRUITS.

Kniphofia Macowani. *Nat. ord*, Liliaceæ. *Linn.*, Hexandria Monogynia. Native of South Africa. Flowers scarlet, tipped with yellow.—"We have several dried specimens of this pretty little Kniphofia, collected by its discoverer, whose name it bears, in grassy places of the Boschberg mountains in Somerset district, where it inhabits elevations of 4000 to 5000 feet. It was described from these by Mr. Baker, and flowered shortly afterwards in the Royal Gardens from roots sent by Professor Macowan. It is best treated as a greenhouse plant, though probably as hardy as the other species of the genus."—(*Bot. Mag.*, *t.* 6167.)

Crocus Crewei. *Nat. ord.*, Iridaceæ. *Linn.*, Triandria Monogynia. Native of Greek Archipelago. Flowers creamy, striped with purple and yellow.—"It is remarkable that so distinct an undescribed plant should inhabit Syra, the best known of all the Greek islands, and one which has long been the coaling station for the Mediterranean steamers, whence the traffic diverges in one direction to Smyrna, and in the other to Constantinople and the Black Sea. This fact shows how much remains still to be done towards the investigation of the bulbous plants of the Levant, and especially in respect of such genera as Crocus, whose flowers are very fugacious.

"Crocus Crewei is a discovery of the gentleman, H. G. Elwes Esq., F.L.S., to whom horticulture is indebted for the introduction of many new Oriental bulbs. He collected seeds and corms of it on hills about 1000 feet high, growing with C. Boryi, and flowering very early, and transmitted corms to the Rev. H. Harper Crewe, who flowered them at the Rectory, Drayton Beauchamp, in March of the present year. At Mr. Elwes's desire I have named it after our common friend, Mr. Crewe, whose collection of Croci is the richest in Europe."—(*Ibid.*, *t.* 6168.)

Dracæna Smithii. *Nat. ord.*, Liliaceæ. *Linn.*, Hexandria Monogynia. Native of tropical Africa. Flowers yellow.—"The precise origin of the handsome Dracæna here figured is unknown; it has been in cultivation for many years both at Kew and Sion House, and it appears to be so closely allied to D. fragrans that I cannot doubt its being an African species, and one probably introduced by Whitfield from the West Coast a quarter of a century ago. As it is, all trace of its history is lost in both establishments.

"Mr. Baker, who I follow in keeping it distinct from D. fragrans, has proposed that the name of the late and present able Curators of the Royal Gardens (both named John Smith, and unrelated) should be attached to this plant, which is the more applicable, inasmuch as the present Curator had charge of the gardens of his Grace the Duke of Northumberat Sion House, where, as well as at Kew, D. Smithii has been long in cultivation. It flowers in winter or early spring in both establishments."—(*Ibid.*, *t.* 6169.)

Balbisia verticillata. *Nat. ord.*, Geraniaceæ. *Linn.*, Monadelphia Decandria. Native of Chili and Peru. Flowers yellow; anthers and pistil red.—"This beautiful half-hardy shrub was introdnced into the Horticultural Gardens in 1825; but like so many other plants requiring occasional protection to insure its continuance in the open air, it soon was lost from out of doors, and coming from a dry cool climate it damped off when transferred to a pit. Such plants, indeed, can be secured only through a constant repetition by cuttings, and by more care than is usually bestowed on plants with unfamiliar names. When properly grown it is exceedingly handsome, flowering in August and September, and resembles a gigantic Hypericum more than an Œnothera, with which latter it has more usually been compared. The Chilian name is Flor de San José, and it has a wide range, both in Chili and Peru, growing on dry hills and ascending to 10,000 feet.

"Balbisia verticillata has been introduced for the second time by Messrs. Veitch."—(*Ibid.*, *t.* 6170.)

Masdevallia Estradæ. *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria. Flowers purple and yellow.—"Though neither so rich in colour nor grotesque in form as the species of Masdevallia lately figured in this work, the present species promises to be a favourite with cultivators from its dense habit of growth, abundant flowering, and the delicate tints of the flowers. It is a native of New Grenada, and was, according to Dr. Reichenbach's statement in the *Gardeners' Chronicle*, first observed in the garden of a New Grenada lady, Dona Estrada, a skilful grower of Orchids. It was subsequently found by Mr. Patin, collector for Mr. Williams of the Victoria and Paradise Nurseries, through whom it was thus first introduced into this country."—(*Ibid.*, *t.* 6171.)

Viburnum Sandankwa. *Nat. ord.*, Caprifoliaceæ. *Linn.*, Pentandria Digynia. Flowers white and pinkish.—"A hardy evergreen shrub, cultivated in Japan, whence we have cultivated specimens gathered by Maximovicz at Nagaski, and native ones from the Loochoo Islands, gathered by C. Wright during the American North Pacific Exploring Expedition in 1853-6, and subsequently in the same island by Dr. Weyrich, communicated from the St. Petersburg Botanic Gardens.

"It has been long cultivated at the Scilly Islands, where the late proprietor, Aug. Smith, Esq., M.P., formed at Tresco Abbey a magnificent collection of half-hardy herbs, shrubs, and trees, principally procured (and this amongst them) from the Royal Gardens, Kew, and from Messrs. Veitch of the then Exeter Nurseries. This collection is now sedulously cared for by his heir, J. Dorrien Smith, Esq., who sent to Kew to be named flowering specimens of V. Sandankwa in March last. It is not a little remarkable that a shrub, native of the Loochoo Islands, which are but little north of the tropics and within the zone of the typhoons of the Chinese seas, should flourish in 52° N. and in the cool Atlantic Ocean. At Kew it has proved hardy planted against a wall in a very sheltered place, but has never flowered."—(*Ibid.*, *t.* 6172.)

Death of Mr. Rollisson.—We regret to have to announce the death of Mr. William Rollisson, the head of the old and well-known Tooting Nursery firm, on Friday last, the 18th inst., in the seventy-third year of his age.

NOTES on VILLA and SUBURBAN GARDENING.

The Vinery.—This house will now need considerable attention, for if the Grapes are forward and commencing to colour they may with advantage have more air admitted to them; the atmosphere should also be kept rather dry than otherwise, though in the early stages of colouring it will be safe to advise

that on hot sunny days the floor and stages of the house may be sprinkled two or three times. I advise this as a preventive against the inroads of red spider, which an amateur cannot so well eradicate as a professional gardener. I do not think it proper treatment to grow the Grapes in a moist atmosphere, and then when a few berries begin to colour suddenly to withhold the application of moisture, for the healthy foliage receives a check, and if there is a little red spider in the house it begins to thrive immediately. I think we cannot speak too plainly to an amateur upon these matters, because in his usually small houses it is a question of a crop or no crop. In speaking of applying moisture, even that treatment ought to be withheld within a reasonable time, say a fortnight after colouring; then if the leaves are healthy they will carry the crop to perfection. Grapes in the above ripening stage, if they are not admitted air all night, the house ought to be partly opened early in the mornings of sunny days, say by six or seven o'clock, to prevent the condensation of moisture upon the berries, which is injurious to them if they are required to hang long; it also detracts from their appearance, because the bloom runs off and they become spotty.

Having hitherto referred to forward Grapes, which is not likely to meet all cases, I will remark on late houses in which the fruit is but just set. Here, then, thinning must be quickly completed, and if the fruit is required to hang well on into autumn allowance must be made for this by cutting out more berries, and tying up the little shoulders, which both improves the appearance of the bunch and allows a circulation of air between the berries. At the same time keep the young growth pinched back at least once a fortnight up to the time of colouring, when it may be allowed to run more freely.

Maintain a growing atmosphere at all times, and if the roots of the Vines are inside of the house the borders must be well watered, that is, not to be satisfied with a mere sprinkling, but give a good soaking, and even the outside border will be the better of a supply, especially if the borders happen to be lightly made with an abundance of good drainage and porous soil. These borders whether inside or out will take large quantities of water at three or four different times during the summer, giving the last one just before the time for colouring, and then proceed as I have directed in the first part of these notes. As to temperature, if the Vines are Muscats they must have a heat of not less than 70° at night, which will be probably maintained by the summer weather, or, if not, a little fire heat at night must be applied. Black Hamburgh Grapes and some of the common White sorts will do with a heat of 65° at night at this time of the year, allowing 5° higher for all sorts in the day, with the addition of 10° for sun heat with air on.—THOMAS RECORD.

DOINGS OF THE LAST AND WORK FOR THE PRESENT WEEK.

KITCHEN GARDEN.

IN the last reference to kitchen garden work we had to complain of the want of rain; since that time an inch and a quarter has fallen with good results.

Early Potatoes and Peas are the most important crops. The Extra Early Vermont Potato has disappointed us this year, not perhaps so much because it is not quite so early or of such good flavour as the earliest English kidney varieties, but because of very nearly half of them becoming diseased. They started well on the early borders and a patch of them in one of the fields, but nearly half has gone off with the disease alluded to in last week's Journal, leaving ugly gaps in places a yard in length. If this new disease is introduced to our fields and gardens, and the Dalmahoys and Regents are decimated as the Early Rosea and Vermonts have been this year, many hardworking farmers will wish that our American cousins had kept their stock at home. Indeed, it is doubtful if any of the sorts that have crossed the Atlantic to England either have or will give universal satisfaction. They are very well as a trade speculation, and are no doubt adapted to those who crave for something new, but they are far behind our own Regents, and cannot be named with the white kidneys.

From Potatoes it is pleasant to turn to Peas. Our vegetable principles are inclined to conservatism, but our old favourite Taber's Early Perfection has probably been sown this year for the last time, and for the earliest crops nothing will be sown but the sorts raised by Mr. Laxton of Stamford. The first sowing has been gathered; it comprised William I. and Alpha, they were ready in the order named. William I. is not only preferred in the kitchen to Taber's Early, but it is by far the best early exhibition Pea. Dr. Hogg was sown on the 27th March, and on the 17th June it was quite ready to pick; it has very handsome curved pods of a deep green colour. Unique sown on the same date was ready a day or two earlier. This will be a very fine Pea for those who have gardens in exposed situations or who cannot readily obtain sticks for the taller sorts. It does not grow more than 1½ foot high; it has very fine-looking pods. Premium Gem is splendid this year. The later sorts are much improved by the rains, which have also kept off the thrips; this pest always attacks our Peas in the summer months, and is not easily destroyed. The hoe had been well kept at work amongst the crops, but after the rains the weeds could easily be discerned; when the surface had become rather dry the Dutch hoe was run through the rows again. Cabbage Lettuce is not grown, but the Cos variety Hick's Hardy White is certainly the very best selection of the Paris White; it has been very fine and has stood well through the drought.

The young Celery plants have been eaten very much by earwigs. Young earwigs burrow in the ground in clusters by day, and come out to the work of depredation at night. A good way to destroy them is to place some dry moss in the bottom of 60-sized pots, and lay the pots on their sides near their haunts; the earwigs will hide in them, and may be destroyed in the morning. As soon as Peas come in plentifully we discontinue cutting the Asparagus, and have now done so.

PINERIES.

Some allusion was made to temperatures two weeks ago; since that time the weather has been such that we could not dispense with artificial heat altogether, although but little has been required. On mild nights the temperature will be from 70° to 75° at 10 P.M. This must not be considered excessively high for a midsummer temperature; on very hot days we have often had it up to 80° and 85° without any artificial heat at that hour, but rather than this should be it is better to leave the ventilators open all night. So far it has not been necessary to do this. If some good strong suckers of Queens could now be obtained and potted in 6 or 7-inch pots, the pots plunged in a brisk bottom heat and a high temperature kept up, under good general management they would nearly all fruit next summer from June onwards. Succession Queens that have now nearly completed their growth should have air freely admitted by day, and be cautiously watered; in a word the growth must be well matured for starting early for early fruit next season. It is quite certain that Pines may be started for fruit as soon as the growths are matured, but they are not likely to give satisfaction unless they have a season of say two months' rest. All plants have a season of rest, and the gardener who carefully studies those periods and treats his plants in reference to them is sure to be successful.

CUCUMBER AND MELON HOUSES.

It is almost a question with us whether it is not desirable to grow the Cucumbers in frames during the summer. Good houses like ours are more useful for Azaleas, Camellias, &c., where they can be placed to make their growths and have their special wants attended to without interfering with any other plants, as is the case when they are placed in vineries, where the plants are too often the medium by which red spider is introduced to the Vines. In Scotland it is necessary to resort to linings of fermenting material to maintain a sufficiently high temperature in frames; but "down south" plenty of good Cucumbers may be grown with the glass protection merely, and many prefer the Gherkins that are grown in the open fields by the acre, and of which some of the large growers cut several tons weekly in the season. All the shelter they require is from rows of Rye sown at intervals across the fields to break the force of the wind.

Melons are nearly all cut, and if anyone is anxious to notice the amazing fecundity of the red spider, an excellent opportunity is afforded as soon as syringing is discontinued to allow the fruit to ripen. Though the leaves may appear quite clean, in a week the active little Acarus will be crowding them in every part. If it had been intended to put out another crop the plants would have been ready, but the house is useful for Azaleas making their growth, and will be utilised for that purpose.

PEACH HOUSES.

In the late houses fruit will be stoning, and in some instances, perhaps, making the second swelling; in either case let the syringe, or if the house is high the garden engine, be applied with vigour. Like the Melon, the Peach tree ought to be quite free from spider when the fruit is on the point of ripening, and this can easily be done by constant syringing from the first. The roots ought to have a thorough watering when stoning is completed. Dressing the surface of the border with rotted manure before watering is preferable to using manure water. Fruit that is ripening ought to be looked over daily, and all that parts freely from the stem ought to be gathered. Hexagon netting, or, indeed, any old shading, may be suspended underneath, into which the fruit will fall. Thoroughly wash the trees and water the borders, if root-watering is necessary, in houses where all the fruit has been gathered.

PLANT STOVE AND ORCHID HOUSES.

Young hardwooded plants, such as Ixoras, Gardenias, Bougainvilleas, &c., also Ferns growing freely that were potted in the early spring months, now require to be placed in larger pots, and if they receive a liberal shift no more will be required this year. Thus a plant in a 7-inch pot may be transferred to a 9 or 10-inch pot, and the more robust-growing specimens may be shifted

into 11-inch pots. We have cut-back the climbers closely. It is certainly a mistake to allow the roof of the house to be much covered; the best specimens are obtained where no climbers are overhead.

Poinsettia pulcherrima has been removed to a cool greenhouse; the plants may even be removed to a sheltered position out of doors with advantage during the summer months. Cuttings of some of the softwooded species were put in during the spring months. They have now been potted-off, and are growing freely. Attention is now required in regard to shading and ventilating; much injury results from not opening the ventilators early in the morning. Houses that catch the morning sun ought to be attended to before six in the morning in hot weather.

Many of the Orchids are now being repotted or placed in fresh baskets. Dendrobiums that have just flowered are starting into growth. As the growths advance fresh roots are thrown out; and this is the best time to repot, or, if this is not necessary, to add fresh peat and sphagnum to the pots or baskets. Cattleyas and all other Orchids may be seen to now, as nearly all the species are rooting freely. Red spider and thrips must be watched for on Dendrobium Devonianum and many others. It may be necessary to sponge the young growths with soapy water, but the plants may be syringed daily.

Some of the Cypripediums are very subject to the attacks of thrips, C. Veitchianum, one of the scarcest and best of the C. barbatum section, particularly so. The thrips attack the centre of the young growths, and it is very difficult to destroy them without injuring the plants. Puffing tobacco smoke in is as good a method as any. Many different species of Orchids are being imported at this season, and the plants require careful management at first. It is a good plan to pot Cattleyas and Lælias amongst clean crocks, adding the peat and sphagnum when fresh roots are formed. Saccolabiums and Vandas may be suspended from the roof until roots are thrown out. Cypripediums do well if laid out on clean moss, and all of them must be sprinkled with water once a-day at least.—J. Douglas.

TRADE CATALOGUES RECEIVED.

E. G. Henderson & Son, Wellington Road, St. John's Wood, London.—*Stove, Greenhouse, and New Plant List.*

M. Alexis Dallière, Ghent, Belgium.—*General Plant Catalogue.*

Ant. Roozen & Son, Overveen near Haarlem, Holland.—*General Bulb Catalogue.*

HORTICULTURAL EXHIBITIONS.

Secretaries will oblige us by informing us of the dates on which exhibitions are to be held.

Stowmarket.—June 24th and 25th. Mr. S. Prentice, Hon.-Sec.
Crystal Palace Company.—Rose Show, June 26th; Autumn Fruit and Flower Show, September 7th to 9th—Sec., F. W. Wilson. Bees and their appliances, September 21st to 23rd—Sec., J. Hunter.
Reigate (Rose).—June 26th. Bushby Britten, Esq., Hon.-Sec.
Hereford (Roses).—June 29th. Rev. C. H. Bulwer, Hon.-Sec.
Wisbeach.—June 30th. Mr. C. Parker, Hon.-Sec.
Maidstone.—(Roses), June 30th, at Vinters Park. H. Benstead, Esq., Hon. Sec., Rose Club, Mill Street, Maidstone.
Norfolk and Norwich Horticultural Society.—Rose Show, June 30th. E. A. Field, Hon.-Sec.
Birmingham.—July 1st, 2nd, 3rd, and 5th. Mr. Quilter, Aston Park Sec.
Spalding.—July 1st and 2nd. Mr. G. F. Barrell, Hon.-Sec.
Tunbridge Wells.—July 2nd. Mr. E. F. Loof, Sec.
Marsden.—July 3rd. Mr. J. H. Edmonton, Hon.-Sec.
Brockham Rose Show.—July 3rd. Rev. Alan Cheales and Charles Mortimer, Esq., Hon.-Secs.
Southgate.—July 3rd. John Miles, Esq., Hon.-Sec., Southgate, N.
Grantham.—July 6th and 7th. Schedules, &c., from Mr. Lyne, Bookseller.
Huntingdon.—July 7th. J. Oldman, Esq., Hon.-Sec.
Durham and Northumberland.—To be held at Elswick Park, July 7th and 8th. Mr. R. Revely, Sec.
Leicester.—July 7th and 8th. Mr. W. C. Marris, 8, New Street, Sec.
Wintebton.—July 7th and 8th. Mr. McCallum, Sec.
Frome (Rose).—July 8th. Mr. A. R. Baily, Hon.-Sec.
Kilsby.—July 8th. Sec., Mr. C. E. Bracebridge.
Richmond.—July 8th. Mr. A. Chancellor, Hon.-Sec.
Nottingham.—Rose Show, &c., July 8th, 9th and 10th. Apply to Alfred Kirk, Municipal Offices, Nottingham.
Oxford (Roses).—July 9th. Mr. C. R. Ridley, Hon.-Sec.
Grange-over-Sands—July 9th. Mr. Thomas Ashley, Sec.
Heworth.—July 14th. Mr. R. H. Feltoe, Heworth, York, Hon.-Sec.
Ogndle.—July 14th. Mr. Alfred King, Sec.
Tonsbridge.—July 14th. Mr. W. Blair, Free Press Office, Hon.-Sec.
Wimbledon.—July 14th and 15th. Mr. P. Appleby, 5, Linden Cottages, Sunnyside, Wimbledon, Hon.-Sec.
Darlington.—July 16th, at Southend. William Hodgson, Sec.
Bramley.—July 19th and 20th. Mr. R. Fox, Sec.
Brecon.—July 22nd. Mr. W. J. Roberts, Sec.
Helensburgh, N.B. (Rose Show).—July 23rd and 24th. Mr. W. Ure, Waddell, Sec.
Cleckheaton.—July 24th. Mr. S. H. Williamson, Hon.-Sec.
Bridge.—July 28th. Mr. E. Hardeman, Hon.-Sec. [Hon.-Sec.
Preston.—July 28th and 29th. Mr. W. Tronghton, 4, Church Street,
Shrewsbery.—July 29th and 30th. Mr. H. W. Adnitt, Hon.-Sec.
Southampton.—July 31st and August 2nd. Mr. C. S. Fuidge, 32, York Street, Lower Avenue, Sec.

TO CORRESPONDENTS.

*** All correspondence should be directed either to "The Editors," or to "The Publisher." Letters addressed to Mr. Johnson or Dr. Hogg often remain unopened unavoidably. We request that no one will write privately to any of our correspondents, as doing so subjects them to unjustifiable trouble and expense.

Correspondents should not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, and should never send more than two or three questions at once. All articles intended for insertion should be written on one side of the paper only. We cannot reply to questions through the post.

Seedling Flowers (*R. N.*).—O! such withered specimens we can only say that the Ivy-leaved Pelargonium is darker than the parent flower, and that the Rose in form has no special merit. No useful judgment can be formed of any flower unless the habit of the plant can be seen.

Selling Garden Produce (*T. H. T.*).—We advise you to have no consideration of what you in other years sold the produce for. If you were the incoming tenant you would not submit to anyone intruding upon the ground and gathering the crops.

Osmunda regalis (*R. F. B.*).—The name "Royal" applied to this Fern is a translation of the specific name "regalis," and was evidently applied to it because it is the tallest and most handsome of our European Ferns. It has the same name in most of our continental languages. In Dutch and German it is Konigliche, king-like; in Danish, Engelregne, of similar reference; and in Spanish and Portugese the name real, kingly, is applied. Osmund in Anglo-Saxon means "house-peace," and the combined names, "House-peace royal," may have had reference to the wound-healing powers our ancestors ascribed to it.

Foreign Florists (*C. K.*).—Write to M. Vorschaffelt, 134, Faubourg de Bruxelles, Ghent, and M. M. Jules Margottin, à Bourg-la-Reine, Paris.

Strawberries Unfruitful (*T. C. J.*).—The plants not having been planted until last autumn we are not surprised at some of them not showing fruit this season, the crowns not having been sufficiently developed for flowering. We should leave them until another year, when they will probably fruit; but if you want runners for a new plantation we should take them only from fruitful plants.

Read's Melon (*R. A. W.*).—In a house this Melon does not show nor set its fruit so freely as a majority of Melons, but in a frame it shows abundantly and sets freely. We think in your case there has been a deficiency of moisture at the roots, and that the atmosphere has been too moist. It requires a rather high and dry atmosphere to secure a good set, with a good moisture in the soil. It is a fine Melon, one of the finest-flavoured of Scarlet-fleshed kinds.

Constructing a Greenhouse (*J. P.*).—You do not give us any data as to what height you can take the back but we presume it may be 13 feet, in which case we should have the width 12 feet, having 2 feet 6 inches of front and end walls above ground, and 3 feet of lights in front and the ends above the wall glass. The rafters for such a house should be 7 inches by 2½ inches, and chamfered on the under side to half their thickness, and these may be fixed 3 feet apart, and between each we should have two sashbars 2½ inches by 1¼, and chamfered on the under side to one-third the thickness. The ventilation we should provide in the upper part, having a light the whole length 18 inches wide, and made to open with crank and lever, and the whole of the front lights should be made to open. As to glass, 21-oz. sheet thirds quality is best, having the squares of 30 to 36 inch in length, and with laps not exceeding a quarter of an inch. You may have five Vines at 6 feet apart, which will not shade the house too much for plants, being no more objectionable in that respect than any other climber. Plant the Vines inside, having at least a 3-feet width of border to plant them in, and have the front wall arched so as to allow of the roots passing from the inside to the outside border.

Climbers for House (*J. C.*).—For the south-east Cydonia japonica and var. princeps, Glycine (Wisteria) sinensis, Jasminum officinale grandiflorum, and Tea-scented Roses Sombreuil, Niphetos, and Maréchal Niel, to which may be added Clematis Lucie Lemoine, Lawsoniana, and Henryi. For the west—Capriolium flexuosum, Lardizabala biternata, Jasminum revolutum, and Tea-scented Rose Maréchal Niel, and Noisettes Céline Forestier, Cloth of Gold, Lamarque, and Rêve d'Or. It may be that you want evergreens which are of neater growth, such are for south-west—Ceanothus floribundus, C. integerrimus, C. Veitchianus, Escallonia macrantha, E. glandulosa, Garrya elliptica, Berberidopsis corallina, and Magnolia grandiflora Exmouth variety. South-east, Berberis Darwinii, Cotoneaster microphylla, Crataegus Pyracantha, and Ligustrum japonicum. The best material for walls is the diamond-wire trellis fixed at from half to three-quarters of an inch from the wall, the nearer the better, providing it will allow of the tying material being passed around it.

Ferns not Thriving (*M. P.*).—The fronds you sent us were scorched, and no wonder when you have for a cold house 80 feet long only three ventilators of 4½ feet each, the temperature rising to 90°, and 100° in hot weather. The Ferns are simply roasted. It is indeed a higher temperature than is needed for stove Ferns. The ventilation you name ought to have extended the whole length of the house, and at this time of the year be left open day and night, having over the opening some wool netting, which would prevent injury from a drying current of air, as would be the case were its force not broken by some obstructive yet open material. The burrs are not good. A porous material is preferable, but it would not prevent the Ferns from growing satisfactorily, providing the rockwork is so constructed as to allow of the water escaping. It would not do any good to cement them over, only it would add immensely to the appearance. Watering with the garden engine is too heavy, and will cause them to brown under so great a heat. Whatever watering is required should be done with a watering pot or with a hose pipe, and not overhead, and the moisture for the atmosphere should be maintained by sprinkling the path, the rockwork, and other available surface morning and evening, which with the shade you name will give you all the moisture required. Ferns require a moist soil without sodderiness, and moist atmosphere, cool and shaded.

Budding Roses (*Committeeman*).—We prefer removing the wood from the shield. No. 561 contains the rules you mention. You can have it if you enclose four postage stamps with your direction.

Reinette du Canada and Northern Spy Apples—Exquisite Peach (*J. E.*).—The first-named Apple is good alike for culinary or dessert use, and Northern Spy is first-rate for cooking, but is seldom used for that purpose, it being considered too good. Exquisite Peach ripens about the middle of September, and is large and excellent.

Fuel for Stove—Tank-heating (*Idem*).—The stove you mention will burn any kind of fuel, but prefer coke or cinders, the latter or both mixed with a little small coal, or the coke broken up rather small. The stove boiler would answer well to heat a tank of the size you name, and in reference to the tank it is manifest the "flow and return should be on opposite sides of the division," which you have accurately described in your sketch.

Removing Vine Tendrils (*F. I.*).—They, as the Vine shoots are secured to the wires or walls, are of no use to the Vines, which is that of enabling them to support the shoots, hence in cultivation there is no need of this appendage, and they are, therefore, removed quite as much for appearance as for any benefit conferred by their removal. Remove them at once.

Berries of Muscat Grapes (*Six-years Subscriber*).—They are attacked by "spot," as gardeners call this ulceration. You have neglected the disease until it has become the worst instance we have seen. It is caused by defective root action. Pick-off all the diseased berries, and water copiously with tepid weak liquid manure. A Grape-grower to whom we have shown the berries says it is "scald" as well as spot, and that you must admit air very early in the morning, indeed leave on a little all night. Both roots and atmosphere are at fault, and you must be prompt in remedying both or your crop will be ruined.

Vine Leaf Spotted (*W. G.*).—There is not much the matter, but the leaf demonstrates that the foliage has received a check by a low night temperature, which has occurred possibly some weeks ago. With a genial atmosphere, damping the house several times a-day, and careful attention to ventilation, especially admitting a current of air all night, your Vines will prosper. The crushed state of the footstalk of the leaf we assume was caused in transit through the post office; beyond that there are no serious symptoms.

Vine Leaf Stained (*H. A. P.*).—The leaf sent is very deficient in substance, and cannot withstand the rays of the sun. It is suggestive also that a high night temperature has been maintained. Apply to the root tepid manure water, do not force the night temperature above 60°, leave on a chink of air at the top of the house all night, increasing it gradually as the temperature rises in the morning; close the house entirely for an hour or two each afternoon, sprinkling the floor with guano water of a strength of 1 oz. to a gallon of water, and shade slightly until the Vines gain vigour. The temperature of the house should not rise beyond 80° after being closed. The scrap of Fern was insufficient to determine the name.

Seakale Treatment (*A Regular Subscriber*).—If the stalks have been cut after blanching they will not require to be cut again during the summer, only if any show flower-stems those should be cut away as they appear. If it has not been blanched and cut as before stated it will only require to have any flower-stems removed, and those just level with the crown, from the side of which will come leaves, and crowns be formed for next year's produce. Keep clear of weeds, and water liberally with liquid manure, slops from the house highly diluted with water being very beneficial to it and Asparagus during growth.

Gosforth Horticultural Show (*Fairplay*).—There is nothing in the rules to prevent your exhibiting in either the open or the cottagers' classes, if your account of yourself is accurate.

Suspension Bridge (*W. E. B.*).—We have had no experience in erecting such a bridge, but any civil engineer could carry out your intention.

Propagating Clematises (*Forester*).—Besides grafting, they are increased by cuttings of firm side shoots—short stubby shoots taken off with a heel, and inserted in light soil in a shady position and covered with a hand-light. From now to the middle of August is a good time to put in the cuttings. The surest mode, however, is by layers in September, not detaching them until the following autumn. Another mode is to lay a ripe shoot about an inch below the soil, and from every eye almost will come a shoot, and they will form roots beneath the soil and become individual plants. The layer must not be separated from the plant. The shoot is the better of a notch about halfway through just below each eye. All the Clematis are sufficiently hardy for bedding out.

Seedling Cyclamens (*Idem*).—After they are potted off singly they should be placed in a frame having a gentle heat, or in a house with a moist heat, sprinkling overhead twice a-day, keeping them near the glass to prevent drawing, and having only moderate ventilation. This should be continued until September or October, and then, if grown in frames, the plants may be removed to a house having a warm greenhouse or cool stove temperature, keeping the plants moist, and shifting them into larger pots as required. By November they will require 5-inch pots, and in February a majority will, the treatment having been liberal, be showing flower. When in bloom they may be removed to a cooler house.

Heating Pit from Kitchen Boiler (*H. W.*).—Your boiler having a hot-water cistern at the top of the house to supply a bath-room, &c., with hot water, will not heat satisfactorily a forcing pit, the flow and return pipe for which are upon the same level as the boiler, or but slightly above it, for the hot-water cistern being at a considerably higher elevation, the water as heated will pass to the cistern, and not circulate, or very sluggishly, in the pipes of the forcing pit. You may, however, heat your house very satisfactorily by taking the return pipe from the cistern instead of directly to the boiler through your forcing pit, and with a gradual decline through the house to the boiler, the pipe not being taken below the boiler. In this way you may heat your house and always have hot water in the cistern for domestic purposes, the forcing pit being heated by the return pipe.

Names of Plants (*W. H. S.*).—Veratrum album, very vigorous. (*C. B.*).—1, Callistemon; 2, Lychnis diurna flore pleno(?); 3, Hieracium aurantiacum. (*H. H.*).—A species of Iberis, probably Garrexiana. (*J. W. S*)—Maurandya Barclayana. (*J. C. H.*).—1, Muscari comosum; 2, Orchis tephrosanthos (?). (*Mac.*).—1, Crataegus coccinea; 2, An Euonymus. (*Maurice Irwin*).—2, Pteris squilina; 3, Blechnum occidentale; 4, Cystopteris bulbifera; 5, Polypodium aureum; 6, Aspidium falcatum. (*D C., Bailey Hill*).—1 Saxifraga nizoon; 2, S. sponhemica; 3, Spiræa; 4, Alyssum. (*J. H.*).—1, Spiræa chamædrifolia; 2, Lychnis viscaria; 3, Scilla nonscripta flore albo; 4, Asplenium Adiantum nigrum; 5, Cystopteris fragilis. (*Rev. S. A. B.*).—We cannot name the Clematis from the flower only. The other plant is Anthericum liliago. (*Ladybird*).—1, Pteris cretica; 2, Davallia tenuifolia; 3, A species of Osmunda. (*Adams*).—1, A Rubiaceous plant, genus not determinable from the specimen; 2, Brassia verrucosa. (*Robert*).—Staphylea pennata, Saxifraga granulata, S. aspera, and an Acanthaceous plant not determinable. (*Amicus*).—1, Erigeron sp.; 2, E. speciosum; 3, Centaurea montana; 4, Hemerocallis flava; 5, Tradescantia virginica; 6, Iberis sempervirens. (*J. Y. J.*).—2, Myoperum; 3, Gesnera; 4, Ceratochloa unioloides; 5, Omphalodes; 6, Dicksonia. (*Henderson*).—Epidendrum virens. (*A. B.*).—We cannot name plants from their leaves only. (*M. C.*).—1, Acer saccharinum; 2, A. Pseudo-platanus; 3, A. campestre.

POULTRY, BEE, AND PIGEON CHRONICLE.

MIDSUMMER-DAY.

To-day is midsummer-day, and this is our midsummer number. We can see our chickens as we write, roaming here and there for insects, and we sigh when we think that this time last year we could have counted our chickens by scores where now we do so by half-dozens. We know other breeders are sighing too; for, in spite of those happy individuals who insist upon letting the world know that they have had better luck than ever this season, we know that it has been a bad season, and that even in very many cases where there is quantity, the quality of last year does not exist. But to-day is midsummer-day, and we will cease from any more melancholy retrospections, and bid

"Good morrow to the golden morning,
Good morrow to the world's delight."

Let us look forward rather, and speak a little of the future, and think over on this midsummer morning what we had best do to make the most of the chickens we have, be they late or early.

Recently we have had showers—almost storms of rain, which, though deadly to the rose blooms, have refreshed the earth and brightened-up the chicken runs. We suppose, however, we shall sooner or later have some of that broiling summer heat which comes in fits and starts during our changeable summers—that heat which plays the "old gooseberry" with the chickens. All have not free range for their birds, and many have not grass runs even, and when the scorching sun dries up their yards the chickens fare but badly. We would recommend such runs being plentifully watered every evening. It is surprising how it cools the ground and helps the birds. We know this idea is not new, for Mr. Wright suggested it some years ago in this Journal, and we know of many who have benefited from it.

Let us think now, too, what we will feed our chicks upon, this being most important. We are convinced change of food is a great benefit. Birds fed one week on one kind of ground food, and another week on another mixture, we find thrive admirably. We use Spratt's food extensively; but we would urge its being used judiciously with early chickens. Nothing can surpass it for giving birds a start and pushing them on; but we find when used in too great quantities it makes the combs develope too quickly, and the birds mature and so become set before they have attained the desired size. It promotes laying, too, in the pullets at too early an age. We speak here of the larger breeds, Dorkings, Brahmas, and Cochins; for the smaller varieties these results would probably not be of such consequence. We find for feeding nothing equals ground oats, ground barley, and best sharps for soft food, with Spratt's food mixed at the discretion of the feeder. We ring the changes on these, and the birds do wonderfully well. For whole corn we like wheat best, nothing surpasses a good sample of this grain for feeding. Barley and buckwheat make a good change, but wheat has our preference. Bone dust we never have used; it is, we believe, in great demand, and so we suppose is of much value in making specimens large for exhibition and pushing them on for the early chicken shows; but from such fed birds deliver us in the breeding pen. Meat, too, is no doubt used extensively in many establishments. This we have tried, but whether we went to work foolishly or not we cannot say; anyhow, after two months we gave it up, for though the birds liked it amazingly, it spoilt their taste for other foods, and, what is much more important, brought on leg-weakness. Many valuable birds while fed upon it entirely lost the use of their legs, and recovered again slowly after its discontinuance. Those who would wish to give meat a trial, or are now using it, we would recommend to make a soup of it, and then mix up the soft food with the broth; but we do not believe this extremely forcing food is at all necessary. We have had our neighbours' share of large chickens and prizes from birds solely fed, but regularly, on sound and wholesome ground and whole corn.

As regards the liquor department of our chickens, a frequent and plentiful supply of pure water is indispensable. We often dissolve a small piece of Walton's paste in the water with a very beneficial effect, and we also often mix up the soft food with boiling water in which a piece of this paste has been dissolved.

Those who have unlimited grass runs and shade of living underwood and large trees really have all that can be wanted. If they do not succeed it is their own fault. They have means and opportunities which those who only have limited and enclosed yards dare not even dream of. We do not here write for

them, but for those who have small bare yards without shade, and exposed to the rays of the sun all day. They can make good living shade by planting or sowing sunflowers and Jerusalem artichokes; it is surprising how quickly they grow, and what splendid shelter they afford. Those who keep the light-coloured breeds which are so liable to tan and burn, such as White Dorkings, White Cochins, and Light Brahmas, cannot do without some shade in the summer. Shelter afforded by doors and posts is almost useless. We want the shade of living undergrowth, beneath which the chickens can creep and rest. The sun has the same browning effect on hackle feathers as it has on the leaves.

Chickens, again, must be occupied. Those runs which are only a few yards square, and which are daintily swept over every day to make them look tidy for visitors, are useless for chickens. Nothing can grow or keep healthy in those smooth billiard-table-like runs. Chickens want to be occupied and must be kept busy. The runs must be dug up, and piles of the loose dirt thrown up one day on one side and one day on another, and the chickens will delight in levelling these. A capital way of keeping chickens on the scratch is to throw their whole corn always down among loose dirt or a lump of straw.

The sexes, too, must be separated in good time. Some breeds are more precocious than others, and so we can fix no positive date for this separation; it must depend on the breed and the breeder's experience. There is, however, another point which we think quite as important—namely, moving every little while the pullets of the larger breeds, where size is a desideratum, from yard to yard, for we are convinced it retards maturity and laying at an early age, and so greater size is procured.

Lastly, one word on exhibiting at the early chicken shows. We know when we have some promising early chickens how very tempting it is to send them to these exhibitions. The pleasure of winning is of course great, but that is nothing to the honour of being well to the front in chickens. We are certain—and we speak from experience—these shows have ruined many a noble chicken. We have had the most promising cockerel of the year literally stop growing from the date of his first show; his comb and his hackles matured, and he became set, increasing in neither weight nor size from that time. This is not a single instance; we wish it was, for hundreds can testify to the fact, and we only introduce it here as a warning to amateurs not to be too eager when they have a good chicken to have it earning its living.—W.

GRIEVANCES AND CORRESPONDENCE.

Fully agreeing with your article of last week that a great deal of unnecessary and foolish correspondence is sent to editors and secretaries, yet there are real grievances which ought to be published as a deterrent to malicious injury, and for the protection of exhibitors. Such a case, I think you will agree with me, is the following:—A friend of mine had a beautiful Game cock. It had taken several local prizes at country shows, and he was induced to send it for trial at one of the more pretentious exhibitions. He did so, and was rewarded by its taking first honours in the class for single Game cocks amongst many competitors. You will easily imagine that such an unexpected result was proudly received by my friend, and he eagerly looked for the return of his treasure, feeling that as the season was still young many subsequent triumphs awaited him. Imagine, if you can, his chagrin and vexation when, on taking the bird from the hamper, the sickle feather was found to have been broken—broken past recovery for that year. Imagine, too, his indignation when a close examination disclosed the too palpable mark of a human thumb, a certain indication that the injury had been wilful and malicious. Complaint to the committee of the exhibition brought no satisfaction. "The bird was right when put into the hamper." Amidst the doubt as to the perpetrator of the outrage, and the uncertainty as to when and where such was committed, I refrain from giving the name of the exhibition, but I can guarantee the facts to be as above stated, and, if necessary, send you the name should any doubt be thrown upon the statement.—Beta.

[The difficulty in such cases is proving who was the delinquent. The only preventive is having travelling baskets with lids so formed and padlocked that no feather can be exposed or fingers inserted.—Eds.]

HANTS AND BERKS SHOW.

Certain spots are haunted, and there are few to which reminiscences do not belong. They may be forgotten for a time, but when we see them again memory goes back, and the past returns fresh as a thing of yesterday. It was so when we approached the showyard at Portsmouth. We recollected some years since the thirty thousand people who thronged the showyard on Thursday, and as we talked of it one remarked "In spite of bad weather." That caused an "ugly pause." We had travelled to the trysting place in wind and rain. We had hoped as we journeyed things would improve, but we hoped in vain, and as we entered Portsmouth it rained faster than ever. It also blew a hurricane. We said to ourselves, "The elements will wear themselves out, and to-morrow all will be calm." The morning brought no change. We have seldom seen such a hurricane as it blew on Tuesday morning. Tents and screens were blown down, strong men could hardly stand against it, and it seemed the sole occupation of many to run after their respective hats. It is, however, the good fortune of those who have the control and management of this Show to have only recollections of success. Nothing disturbs them. Like the Captain of the Trirene, "if the wind blows hard the shorter will be the voyage; if the weather be calm it will be safer." None of the officials seemed to have any misgivings.

It is true there were large puddles of water in places, and that everything that was not protected was blown away, but the Show went on as if in halcyon times. The Judges worked in cloaks and great coats, giving their backs to the wind, and the "Royal Counties" Exhibition was, as usual, a fine display. What a change from the time when a show was held for a few hours in a field at Basingstoke! Now there were flowers, dogs, instruments of all kinds; not merely agricultural and useful, but all sorts of things of luxury—cement that made broken china stronger than it was before, hand machines that put out a fire before it had time to burn up, steam engines that could do anything but clean the drawing-room windows, seed establishments that were of themselves an exhibition, cunning contrivances of marionettes, some rowing boats, some fishing, some ringing bells, some walking about—*i.e.*, as soon as the spectator chose to obey the civil address to be read at the bottom—"Please to put in a penny, and set the machinery in motion." "*Vivat Regina*, and no money returned" thought we. Capital appliances for the gardens—terra cotta lions, Barberini and Portland vases, mignonette boxes, greenhouses that may be turned inside-out by the judicious use of two or three ropes, hand-glass frames and bells that were in reality small hothouses, tents for lawns in hot weather (glass at 48°, and wind blowing a hurricane), we could not help asking where the fireplace was; carriages so light they wanted no horse to draw them, churns that would do more with milk than ordinary ones with cream; in fact, there was everything wanted, and everything besides; a good experienced staff, and every man at his post.

The prize-list we publish will tell the names of the winners in the poultry department. Our task will, in consequence, be confined to a running comment on the different classes. *Dorkings* have fallen off in numbers, because they have improved in quality. Paradoxical as this may seem, it is not the less true. Very few agriculturists could hope for success in competing with Mr. Burnell, but we did think they could make a better fight for it. A Show of this kind should be not only an exhibition, but it should be a saleyard where profitable birds may be bought. Another, and perhaps a still more useful view of it is, that it affords an opportunity of comparing our own birds with those of others.

There were very good specimens of *Cochin-Chinas*, and the four colours—Buff, Partridge, White, and Black—were well represented. Our experience of the Blacks is not favourable. We bred these many years ago. We have tried them since. We have no difficulty in keeping Black hens, but we cannot keep a Black cock; they moult either red or white feathers. The *Game* fowls were perfect; we use the word advisedly. We have seen much worse classes at larger shows. It may be used for the Black Reds, Brown Reds, and Duckwings. Some White Game were shown, but they are never equal to their coloured brethren. Using a power placed in his hands by the liberal managers of this Show, the Judge awarded extra prizes both to Game and Cochins. The *Polands* were weak classes, but the quality of the Silvers was good. There were average specimens of *Spanish*. Among them there was the present trouble of birds with cauliflower faces that wrinkle and grow till they shut out daylight from the eye. We believe a smooth face to be one of the signal merits of a Spanish cock. The Golden-pencilled *Hamburghs* were excellent. The first-prize was almost a faultless pen. These birds are always good in these counties, but the Silvers have become worse and worse till they have suffered extinction so far as the prize-list is concerned. On this occasion both prizes were withheld. The Golden-spangled were very good. The Silver-spangled deservedly gained an extra prize. It will be seen the Spangled varieties distanced their Pencilled brethren. We are sorry for it. There is room in the United Kingdom for both breeds, and when we think on what has been done we cannot help feeling disappointed that no one will rescue these useful and handsome birds from their present neglected and retrograde position.

Brahmas, both Light and Dark, brought large classes, and many of the pens were made up of excellent birds. They had size, weight, and form. These valuable fowls have held their own during many years, and will continue to do so. They have the qualities that should commend them to every farmyard where a good hearty fowl is wanted—one that will

lay and rear and give no trouble. Game *Bantams* very good. These seem to have done much to "snuff out" the Sebrights; only one pen was shown, and that was obliged to take refuge in the Variety class. It was an excellent pen of Silvers; the dead white ground was perfect. *French* fowls were represented in each variety; good specimens of each. The Various class was strong; Dumpies, Andalusians, Silkies, Black Hamburghs, Black Polands with white tops, Malays, Indian Game, and a species of Juugle Fowl we must call "indescribable," yet we will attempt some of its leading features. First it speaks an unknown tongue more akin to a grunt or growl than we ever before heard from a fowl. The face and crown naked and the skin very red and shining; the eye dark and very small, being to all appearance partly concealed by the skin of the face being stretched over it; the beak and the appearance of the head suggesting a *mésalliance* between a Puffin and a fowl; dark plumage; the crown of the head having a seam that would seem to point to an operation such as dubbing, and we are not sure they had not been somewhat trimmed. Hen and cock very much alike. Ronen *Ducks* very weak; Aylesburys good in quality, but shown in small numbers. The Variety class deserves mention only because it contained a pair of Shovellers in good hard condition. It was formerly thought a feat to keep these alive. *Geese* were good, but it is not the time of year to show *Turkeys*.

Pigeons were strong in numbers and quality. Among the Fantails they were unusually good. Magpies deserved and received an extra prize. Some of the Homing birds were very good. The Varieties were showy, and they received an extra prize; the Barbs among them were very good.

The foreign Rabbits were more numerous than any others. The Hare Rabbits were better than common.

Dorkings.—*Coloured.*—1 and 2, T. C. Burnell, Stratton, Micheldever. 3, Mrs Radclyffe, Hyde, Wareham. *Silver-Grey or White.*—1 and 2, O. E. Cresswell, Early Wood, Bagshot. 3, Withheld.

Cochins.—1, S. R. Harris, Cusgarne, St. Day. 2, R S. S. Woodgate, Pembury, Tunbridge Wells. 3, Mrs. Radclyffe. Extra Prize, G. Parker, Fareham. *c*, H. Gibson. Brockenhurst.

Game.—*Black-breasted and other Reds.*—1, E. G. Farquharson, Blandford. 2, T. Faulkner, jun., Merston, Isle of Wight. 3, W. W. Pyne, South Lancing. *hc*, Miss S. M. Osborn, Yarnton, Oxford; J. T. Browne, St. Austell. *Any other variety.*—1, J. Beattie, Southsea, Portsmouth. 2, E. G. Farquharson. 3, J. T. Browne.

Polands.—*Golden.*—1, C. Hannen, Gosport. 2, G. J. Leony, Lewes. *Silver.*—1 and *c*, J. Hinton, Warminster. 2, G. J. Leony.

Spanish.—1, W. Bubb, Southsea. 2, E. Creese, Southsea.

Hamburghs.—*Gold-pencilled.*—1, T. Faulkner, jun. 2, G. M. Rolls, Monmouth. *hc*, J. Long, Bromley; G. F. Wheeler, Portsea.

Hamburghs.—*Golden spangled.*—1, G. M. Rolls. 2, J. K. Harris, Warminster. *hc*, J. Carr, Swansea. *Silver-spangled.*—1, J. Long. 2, J. Carr. Extra Prize, S. R. Harris, Cusgarne, St. Day. *c*, Miss E. Miller, Woodlands, Erleigh, Reading.

Brahma Pootra.—*Light.*—1, Horace Lingwood, Creeting, Needham Market. 2, T. Smith, Charlbury, Oxon. 3, H. M. Maynard, Holmewood, Ryde, Isle of Wight. *c*, J. Long, Bromley; H. M. Maynard; W. E. Fitt, Winchester; T. Smith. *Dark.*—1, Horsea Lingwood. 2, P. Ogilvie, Hambledon. 3, J. R. Way, Southsea. *hc*, Capt. A. R. Warren, Elmsworth. *c*, Miss Pasley, Moorhill, Fareham; Mrs. Dowse, Buckland, Portsmouth.

Bantams.—*Game.*—1, W. Adams, St. Clements, Ipswich. 2, F. Fielder, Southsea. *hc*, — Campbell, Furness, Westbourne; W. W. Gladwin, Tunbridge Wells; W. Adams. *Any other variety.*—1, Rev. G. F. Hodson, North Petherton, Bridgewater. 2, H. M. Maynard.

French Fowls.—*Crève-Cœur, La Flèche, or Houdans.*—1, J. H. Ward, Gussage, Salisbury. 2, Mrs. Dowse, Buckland, Portsmouth. 3, Rev. N. J. Ridley. *hc*, J. H. Ward; G. W. Hibbert.

Variety Class.—1, T. P. Edwards, Lyndhurst, Hants (White-crested Polands). 2, Rev. N. J. Ridley, Newbury (Malays). 3, J. Long, Bromley (Black Hamburghs). *hc*, Mrs. Dowse (Andalusian); O. E. Cresswell (Silkies); T. P. Edwards, Lyndhurst (White-crested Polands); W. Wildey, Cosham (Blue Andalusians); T. Norwood, Salisbury (Black and White-crested Polands); S. Howard, Southsea (Small Black Indian, Jungle Fowl); J. Hinton, Warminster (Malays).

Ducks.—*Rouen.*—1, T. Faulkner, jun. *Aylesbury.*—1, S. R. Harris, Cusgarne, St. Day. 2, T. Kingsley, Tring. *hc*, Mrs. Radclyffe. *Any other variety.*—1, L. W. Kelleway, Newport, Isle of Wight. 2, R. Wilkinson, Guildford.

Geese.—1, T. Kingsley. 2, Mrs. Radclyffe.

Turkeys.—1, Rev. N. J. Ridley.

PIGEONS.

Carriers.—1 and 2, H. M. Maynard, Holmwood, Isle of Wight. *hc*, H. Yardley, Birmingham.

Tumblers.—1, H. Yardley. 2, A. W. Pearce, Portswood, Southampton.

Fantails.—1 and 2, H. M. Maynard. Extra Prize, Miss J. Milward, Newton St. Loe, Bristol. *hc*, J. Hinton, Warminster. *c*, H. Yardley.

Tumpeters.—1, Withheld. 2, J. D. Blackman, Southampton. *hc*, W. Flanagan, Reading.

Magpies.—1, C. G. Hitchcock, Oxford. 2, A. P. Maurice, Bourton, Bath. Extra Prize, T. Homes, Lower Sydenham.

Homing.—1, G. Parker, Fareham. 2, G. H. Billet, Southampton. 3, H. Dacre, Winchester. 4, E. G. Charpentier, Portsmouth.

Any other Variety.—1, H. M. Maynard (Black Barbs). 2, T. Homes. Extra Prize, W. H. Boys, Fareham (Dragoons). *hc*, S. Howard, Southsea (Pouters); W. H. Boys. *c*, J. Lush, jun., Salisbury (Blue Dragoons).

RABBITS.

Longest Ears.—1, G. Hill, Winchester. 2 and *hc*, R. Bright, Reading.

Foreign.—1, P. Ogilvie, Hambledon. 2 and *c*, G. Hill. Extra Prize, J. Ellis. *hc*, F. Currey, Southsea; P. Ogilvie.

Any Variety.—*To include all points.*—1, R. Bright, Reading. 2, G. Newman, Winchester. *hc*, G. Hill.

Extra Stock.—*hc*, W. B. Boxall, Strathfieldsaye; G. Tubb, Basingstoke.

Judge.—Mr. J. Baily, London.

Preserving Eggs.—In America paraffin is now coming into use for covering the shells of eggs as a preservative. 2 lbs. weight of the paraffin are sufficient to preserve three thousand eggs for several months; the eggs must be operated upon when fresh; when they will shine like ivory. Not the slightest taste of the paraffin is detected.

THE THORNE EXHIBITION OF POULTRY AND PIGEONS.

Although this Show has been held annually for the last twenty-three years, there cannot be a doubt that for general good quality none have exceeded the one just concluded. The grounds in which it took place are exceedingly beautiful, and the arrangements were of a most satisfactory character, with the exception of the fact that the pens were placed entirely in the open field, consequently the poultry and Pigeons were quite exposed to the violence of the thunderstorms that prevailed at intervals throughout the day. The entry of poultry was about three hundred pens, and in this division of the Show Mr. Hewitt officiated.

There were some grand specimens of *Dorkings* shown, the dark-feathered birde being decidedly the most praiseworthy. The entries of *Spanish* were unusually good, even when contrasted with the classes of this fashionable variety as we find them at our largest poultry exhibitions. The first and second-prize Spanish cocks were a very close run; and in the class for Spanish hens seven or eight stood side by side that required a lengthy inspection by the Judge before the prizes were finally awarded. Strange to say, in the Selling class the winning birds were also Spanish, and of a quality quite equal to those just referred to. In *Cochins* many were grand specimens, the Buffs and Whites particularly so. Want of high condition, however, mostly prevailed among the Buffs, as might have been reasonably expected so late in the season. In the *Brahmas* the Light-feathered birds were decidedly bad; but the Dark birds made ample amends, more particularly the hens, and the pencilling of some of them was quite equal to that of any show of late years. *Game* fowls, throughout well shown, were very excellent even classes, the Brown Reds and Red Piles being especially fine-feathered, and the Black Reds were also in very high condition. A Variety class for cocks brought out a splendid Silver-spangled Poland, a Black Hamburgh, and a Golden-spangled Poland of highest character as the prizetakers, in the order named. The *Bantams* as a whole greatly lacked condition, with perhaps the exception of the Red Piles and the Black. A very good Pekin Bantam hen was shown among them, apparently in a dying state. The *Geese, Turkeys*, and fancy *Ducks* were superior, the latter especially so; Whistling Ducks, Mandarins, and Chilian Pintails taking the prizes in the order named, and but rarely are three pens so excellent seen together. This Show received a very general support from not only the residents but also parties from a distance.

Dorkings.—*Cock.*—1, J. Walker, Spring Mount, Rochdale. 2, W. Roe, Newark. 3, W. H. Crabtree, Levensbulme, Mancheater. *hc*, J. Blanchard, Driffield. *Hen.*—1, J. Walker. 2, W. H. Crabtree. 3, J. H. Rockett *hc*, W. Roe; R. Carr, Whitby. *c*, W. Harvey.

Spanish.—*Cock.*—1 and Cup, J. Boulton, Bristol. 2, H. Beldon, Goitstock, Bingley. 3, R. Newbitt, Epworth *hc*, J. Powell, Bradford. *Hen.*—1, R. Newbitt. 2, E. Brown, Sheffield. 3, J. Thresh, Bradford. *hc*, J. Thresh; R. Newbitt; J. Boulton; H. Beldon. *c*, J. Powell.

Cochins.—*Cinnamon or Buff.—Cock.*—1, Urwin & Iheston, Whitby. 2, Clark and Pennock, Whitby. 3, E. Winwood, Worcester. *hc*, J. Walker, Rochdale; R. P. Percival, Northenden (2); G. Blakey, Driffield. *c*, W. Mitchell, Birkenshaw. *Hen.*—1, W. H. Crabtree. 2, H. Robinson, Sheffield. 3, R. P. Percival. *hc*, J. Walker; A. Spencer; W. Harvey; G. F. Umpleby, Boroughbridge. *c*, J. North, Fartown, Huddersfield.

Cochins.—*Any other variety.—Cock.*—1, W. Whitworth, jun, Longsight, Manchester 2, W. H. Crabtree. 3, J. Walker. *c*, Rev. R. Story, Lockington Vicarage, Derby; Mrs. F. Bacon. *Hen.*—1, W. Whitworth, jun. 2, R. P. Percival. 3, Mrs. F. Bacon.

Brahmas.—*Dark or Light—Cock.*—1, W. Schofield, Birkenshaw. 2 and *hc*, T. F. Ansdell, Cowley Mount, St. Helens. 3, W. Whiteley, Sheffield. *Hen.*—1, Cup, and 2, T. F. Ansdell. 3, W. Whiteley. *hc*, R. P. Percival. *c*, W. H. Crabtree.

Game.—*Black Red—Cock*—1, E. Winwood. 2, J. A. & H. H. Staveley, Tipthorpe, Driffield. 3, H Walker, Gomersal. *Hen*—1, T. Sales & R. Bentley, Crowle. 2, J. Mason, Worcester. 3, E. K. Fox, Bradford.

Game.—*Brown Red.—Cock.*—1, F. Sales & R. Bentley. 2, H. E. Martin, Sculthorpe. 3, E. Winwood. *hc*, R. Pearson, Swansea; Webster & Adams, Beverley. *Hen.*—1, F. Sales & R. Bentley. 2, Dr. Cameron, Epworth. 3, W. Perrin. *hc*, C. H. Wolff.

Game.—*Duckwing, or other Grey or Blue.—Cock.*—1, F. Sales & R. Bentley. 2, J. Mason. 3, Webster & Adams. *hc*, J. A. & H. H. Staveley; W. Whitworth, jun. *Hen.*—1, F. Sales & R. Bentley. 2, Webster & Adams. 3, J. Wright. *c*, G. Holmes, Great Driffield.

Game.—*White, Pile, or any other variety.—Cock.*—1, Pickering & Duggleby, Driffield. 2, R. Walker. 3, H C. & W. J. Muson. *Hen.*—1, H. C. & W. J. Mason. 2, Pickering & Duggleby. 3, E. Winwood.

Hamburghs.—*Gold or Silver-spangled.—Cock*—1 and 2, H. Beldon. 3, J. H. Rockett. *Hen.*—1 and 2, H. Beldon. 3, Ashton & Booth, Broadbottom, Mottram.

French.—*Cock.*—1, W. Cutlack, jun., Littleport, Isle of Ely. 2, W. H. Crabtree. 3, W. Whitworth, jun. *hc*, G. W. Hibbert, Godley; D. Grant, Bradford. *Hen.*—1, W. Cutlack, jun. 2 and 3, H. Grant, Bradford. *hc*, G. W. Hibbert; W. H. Crabtree; E. Brown. *c*, W. Whitworth, jun.

Any other Distinct Variety.—*Cock.*—1, H. Beldon. 2, J. Kellet. 3, A. and J. H. Silvester. *hc*, S. G. Hepplethwaite; J. Jackson. *Hen.*—1, H. Beldon. 2, A. & W. H. Silvester. *hc*, P. G. Hibblethwaite.

Game Bantams.—*Black Red.—Cock.*—1, R. J. Hartley, Altrincham. 2, A. Sugden. 3, W. F. Entwisle, Westfield, Bradford. *c*, W. Roe; A. Smith, Northowram; E. Jennings, Stanningley. *Hen.*—1, Mrs. Dale, Rawcliffe, Selby. 2, A. Sugden. 3, R. P. Plumptree.

Game Bantams.—*Any other variety.—Cock.*—1, R. Newbitt. 2, A. C. Bradbury. 3, G. Dawson, Epworth. *hc*, W. F. Entwisle; G. Lewes, Swansea; F. Sales, Crowle; Bellingham & Gill. *Hen.*—1, W. F. Entwisle. 2, Bellingham & Gill. 3, Mrs. Dale.

Bantams.—*Any variety not Game.—Cock.*—1, J. Mays, Gloucester. 2, H.

Beldon. *s*, A. & W. H. Silvester. *he*, A. C. Bradbury. *Hen.*—1, H. Beldon. 2, A. C. Bradbury. 3, A. & W. H. Silvester. *he*, A. Smith.

DUCKS.—*Aylesbury or Rouen.*—1, E. Snell, Barrowden, Stamford. 2, J. Walker. 3, W. Fell, Adwalton. *Any other variety.*—1, H. Yardley, Birmingham. 2, A. & W. H. Silvester. 3, J. Walker.

GEESE.—1, J. Walker. 2, J. Hepworth, Hatfield. 3, T. J. Crowcroft.

GIBS.—1, G Fillingham. 2, O. H. Young, Driffield. 3, A. J Wells, Hatfield.

SELLING CLASS.—1, J. Fowell. 2, R. Newbitt. 3, H. Robinson. *he*, Rev. R. Story, Derby (2); T. C. Newbitt, Epworth. *c*, W. Mitchell; R. Newbitt; W. Perrin.

PIGEONS.

CARRIERS.—*Cock.*—1 and 3, E. Horner, Harewood, Leeds. 2, H. Yardley. *he*, J. Walker. *c*, H. Brown, Walkley. *Hen.*—1, H. Yardley. 2, E. Horner. 3, J. Walker.

POUTERS.—*Cock.*—1, W. Harvey. 2 and 3, J. Hairsine, Hull. *hc*, E. Horner. *Hen.*—1, W. Harvey. 2 and *c*, E. Horner. 3, J. Blanchard. *he*, J. Hairsine.

TUMBLERS.—1, H. Yardley. 2 and 3, A. & W. H. Silvester. *hc*, E. Horner; H. Yardley; Webster & Adams. *c*, Webster & Adams.

JACOBINS.—1, J. Blanchard. 2 and 3, T. Holt, Bradford. *he*, W. Harvey; J. Blanchard; E. Horner.

NUNS.—1 and 2, E. Horner. 3, T. Green. *he*, Rev. A. J. Brooke; H. Yardley. *c*, Rev. A. J Brooke.

TRUMPETERS.—1 and 2, W. Harvey. 3, E. Horner.

TURBITS.—1 and 3, H. Yardley. 2, G. Richardson. *he*, E. Horner; A. & W. H. Silvester (2).

FANTAILS.—1 and 2, J. Walker. 3, J. F. Loversidge.

BARBS.—1 and 2, H. Yardley. 3 and *hc*, E. Horner.

DRAGOONS.—1, 2, 3, and *vhc*, R. Woods, Driffield. *he*, H. Yardley.

ANTWERPS.—1, W. F. Entwisle. 2 and 3, W. Harvey. *hc*, E. Horner; W. F. Entwisle; H. Yardley.

MAGPIES.—1, E. Horner. 2, J. Blanchard. 3, M. Ord, Sands, Sedgefield, Durham.

ANY OTHER VARIETY.—1, E. Horner. 2, H. Yardley. *he*, G. Richardson; M. Ord; A. & W. H. Silvester (3); W. Harvey.

SELLING CLASS.—1, H. Yardley. 2, J. Blanchard. 3, A. & W. H. Silvester. *hc*, E. Horner; H. Brown; A. & W. H. Silvester.

Mr. Edward Hewitt judged poultry, and Mr. Cannon the Pigeons.

YORK BIRD SHOW.

YORK Summer Cage-bird Exhibition, the first Show of any great importance to fanciers since the one held at the Crystal Palace, took place in the Bootham Field, situated on the outskirts of the ancient city, on the 16th, 17th, and 18th instant. It is true that several bird shows on a less scale have recently been held at Epworth, Bedlington, Rugby, and Crowle, but at each the classes were limited. At York no less a number than thirty-seven classes were named in the very good schedule sent forth, which had the effect of bringing out of their shells some of the leviathan fanciers, who exhibited in full force, notwithstanding the enormous price of Canary seed. We could not help noticing that in a great number of the cages not a single grain of Canary seed was to be seen, and in other instances only a moderate supply, thus bearing out the remark we have before made, that Canaries and many other cage birds are not so much dependant upon Canary seed as was formerly believed. It was only in a very few cages that Canary seed was abundantly provided, and the birds appeared no better in health and condition than those having to content their appetites with millet, rape, hemp, linseed, groats, and cake.

The Show took place in a large marquee, and was well patronised by the fancy of York and surrounding towns. Some of the champion birds of last season were sent to the post, and succeeded in gaining further laurels. The portion of the Exhibition where the young birds were shown was very interesting, there being several very fine specimens present. Mr. Oxberry of Nunnery Lane, York, the winner of the extra prize, exhibited a fine, large, and elegantly-constructed breeding-cage, containing an interesting family of birds five days old. The old hen, without the least fear whatever, sat upon her young in the nest during the entire Show. The care and attention bestowed by the parents to the young brood during the time the marquee was thronged with visitors attracted a good deal of attention, and to the juvenile visitors especially was most interesting. Mr. Calvert of York also exhibited a curious specimen of an Indian cage, containing a couple of Java Sparrows. Mr. Wand of York also contributed a musical birdcage, which occasionally struck up "The Campbells are Coming," with the air of the tenant in the cage, whose periodical and somewhat incessant hopping caused a wheel to revolve and produce the tune. Another noticeable feature, and somewhat novel too, was a pattern show cage exhibited by a York fancier, whose name we failed to obtain. The cage was of the ordinary size for a show cage, and one very good point about it was that the front was so constructed that it could be slid upwards (an advantage certainly for cleaning the inside instead of unscrewing) without interfering with the two cross perches, which screwed into the back of the cage, each perch being secured at the behind part with a wooden nut. An upward sliding door or entrance was made at one of the sides, thus preserving the wired front of the cage from any impediment. Mr. Wilson, the Honorary Secretary, and his assistants did their duty well. The following are the awards :—

BELGIANS.—*Clear Ticked or Yellow or Buff.*—1 and 3, — Forth, Pocklington. 2, L. Belk, Dewsbury.

NORWICH.—*Clear Yellow.*—1, Cleminson & Ellerton, Darlington. 2, J. Calvert, York. 3, J. Stevens, Middlesborough. *Clear Buff.*—1, J. Adams, Coventry. 2, — Burton, York. 3, Cleminson & Ellerton.

NORWICH.—*Evenly-marked Yellow or Buff.*—1, G. Gayton, Northampton. 2, G. & J. Mackley, Norwich. 3, J. Bexson, Derby. *Ticked or Uneven-marked Yellow or Buff.*—1 and 2, J. Adams. 3, Cleminson & Ellerton.

NORWICH.—*Crested Yellow or Buff.*—1, G. & J. Mackley. 2 and 3, F. Woodward, Derby. *Even-marked Yellow or Buff.*—1, G. & J. Mackley. 2, Petty and Cuss, York. 3, R. J. Smith, York.

YORKSHIRE.—*Clear Yellow.*—1, J. Thackray, Great Horton. 2, J. H. Shepherd, Beverley. 3, G. Simpson, York. *Clear Buff.*—1, L. Belk. 2, T. Carliss, York. 3, — Burton, York.

YORKSHIRE.—*Evenly-marked Yellow or Buff.*—1 and 3, L. Belk. 2, W. & C. Burniston, Middlesborough.

CINNAMON.—*Jonque* —1, J. Adams 2, Cleminson & Ellerton. 3, S. Tomes, Northampton. *Buff.*—1 and 2, J. Adams. 3, S. Tomes. *Ticked or Marked Jonque or Buff.*—1 and 2, J. Adams. 3, R. Pearson, Whitby.

LIZARDS.—*Golden spangled.*—1, Holdsworth & Oliver, Harrogate. 2, S. Bunting, Derby. 3, Cleminson & Ellerton. *Silver-spangled*—1, S. Bunting. 2, Cleminson & Ellerton. 3, T. M. Reid, Halifax. *Gold or Silver-spangled with broken cap, &c.*—1, S. Bunting. 2, Cleminson & Ellerton. 3, J. Adams.

MULES—*Yellow or Buff Goldfinch.*—1, S. Bunting. 2, J. Stevens. 3, J. Adams. *Dark Goldfinch.*—1, R Hawman, Middlesborough. 2, S. Bunting. 3, J. Cowl, York. *Any other variety.*—1, J. Bexson. 2, J. Stevens. 3, W. & C. Burniston.

SELLING CLASS.—1, J. Adams. 2, F. Woodward. 3, S. Tomes.

BRITISH OR FOREIGN BIRDS.—*Best collection of not less than twelve varieties.*—1, Mrs. Calvert, York. 2, J. Calvert.

PARROTS.—1, Miss English, York. 2, S Bunting. 3, — Thorpe, York.

BRITISH BIRDS.—*Goldfinch.*—1, — Forth. 2, T. Cleminson, Darlington. 3, Cleminson & Ellerton. *Bullfinch.*—1, W. & C. Burniston. 2, — Burton. 3, Mrs. Bramley, York. *Linnet.*—1, R. Pearson, Whitby. 2, J. Dickinson. 3, — Batchelor. *Any other variety.*—1, W. Garbutt, York (Starling). 2, J. E. Barr, York. 3, W. & C. Burniston.

EXTRA PRIZE.—*Bird and Cage.*—1, — Oxberry, York.

BIRDS BRED IN 1875.

The following ten classes were devoted to Canaries bred during the present season, clothed in their nest feathers, and the competition in most instances was spirited. Many fine promising birds were exhibited :—

NORWICH.—*Yellow.*—1, J. Taylor, Hull. 2, W. Havers, Norwich. 3, G. & J. Mackley. *Buff.*—1, Harland & Son, York. 2, — Burton. 3, Miss Burton. *Even-marked Yellow or Buff.*—1, Mrs. Calvert. 2, T. Armstrong, Durham. *Dark-crested Yellow or Buff.*—1, S. Stratford, Northampton. 2, J. Smith, York. 3, R. J. Smith, York.

NORWICH.—*Nest of Yellow.*—1, T. Humphrey, York. 2, Harland & Son. *Nest of Buff*—1, T. Humphrey. 2, Harland & Son. 3, — Burton. *Nest of Crested.*—1, J. Jarvis, Scarborough. 2, W. Lazenby, York. 3, Harland & Son.

NEST OF LIZARDS.—1, S. Bunting. 2, Snowdon, Leeds.

CANARIES.—*Cage of Six Varieties.*—1, Mrs. Calvert. 2, W. Howard, Harrogate. 3, J. Jarvis.

JUDGE.—Mr. Geo. J. Barnesby, Derby.

SILVER-GREY RABBITS.

FOR the last few years the exhibition Silver-Greys have assumed a shade too dark, and many of them have had very dark heads, feet, and tail, which did not represent in colour and proportionately the true silver shade. Mr. Firth maintains, and I think he is right, that a Silver-Grey should not be of the dark shade, because that is not indicative of the silvery shade, and the difficulty is in producing the proper light silvery shade, whilst the dark shade is numerous.

Not long ago Mr. Hudson held a contrary opinion, but his specimens are none of the too light shade—an extreme as objectionable as the too dark shade, and the tendency of breeding the Silver-Greys now-a-days too light is through the instrumentality of Mr. Firth, although his specimen which successfully figured in the exhibition pen possessed, in my opinion, the exact proportionate blue tint throughout the silvery shade. I would recommend Silver-Grey breeders not to breed their specimens too light, but with the beautiful blue-tinted shade which by proper and judicious selection can be unmistakeably accomplished. Mr. Firth contends that a very dark Silver-Grey doe paired with a light-shaded buck will rarely if ever give offspring of the proper exhibition shade; but dark does, possessing the sharp, silvery, proportionate shade paired with a too light shaded buck, seldom or ever give offspring of an inferior shade, and this information coming from a breeder of experience should be of sufficient weight to encourage breeders to adopt such a selection of breeders.—G. R. SAVAGE.

THE CARRIER PIGEON—ITS INSTINCT.

THE Carrier Pigeon is becoming more than ever an object of attention, since the Pigeon societies have multiplied to that extent that nearly all our villages possess their own. Also one counts by hundreds of thousands the number of these winged messengers that from Belgium they annually transport to distances more or less remote. Monsieur Dr. Chapins, member of the Belgian Academy, has published upon this subject an excellent work entitled "The Instinct of the Carrier Pigeon, and the Means of Perfecting It."

By what means, by virtue of what faculties, are our aërial travellers able to regain their chosen home? Some have given it the name of instinct, which explains nothing; others have the idea that the Pigeon is endowed with a sensibility so great that he is able to find a guide in the difference of the density of the various currents of the atmosphere. They affirm that the Pigeon always directs itself from south to north, or better, that he rises to such heights that his sight determines his direction. These are the allegations that M. Chapins contests, without having, however, the pretence of giving the solution of the problem. In the end he treats of the organisation of the Pigeon, the capacity and delicacy of its organs of sense, and finally its faculties natural or acquired.

The organisation of the Pigeon is that of all birds in general, and in the natural order it forms the connection between Swallows and the gallinaceous tribe. It holds the first by its sustained flight, and the second by the facility with which it walks upon the earth. As to the organs of sense, one does not observe an essential difference between the Pigeon and other birds in general. The judgment and taste are with it little developed, and the same with sense of smell; but as to the hearing and sight, it is greatly favoured. However, does the perfection of its sight suffice of itself to explain the faculty of correctly directing its flight? In the examination of this last question he strives first to determine to what height the Pigeon takes its flight when set at liberty in a distant location, afterwards to discover if the objects are distinctly seen through the vapours that arise from the earth. Thirdly, the question is how it can discover often from a distance of 200 or 300 leagues, and if the curvature of the earth does not perhaps raise a barrier to the sight of a point to be obtained. It is true that a Pigeon liberated at some distant point rises from a general to a sufficiently greater height, and it is probable that it thus maintains itself in the course of its voyage. It is also probable that this height does not exceed 1000 feet, from thence what sight unrolls to its view? It results from the reasoning of the author (based upon the ascension of Mont Blanc), that supposing the Pigeon was able to elevate itself to 4810 metres, and that its sight equals that of man's aided by the best optical instruments, its view in a given direction does not exceed 52 leagues and 4 kilometres; but now we see that it does not attain even a fourth part of that altitude. Then it has for this distance much to overcome with the curvature of the earth, which we mentioned before as an obstacle to the sight, and it has again the clouds, the rain, &c, all causes which obscure the atmosphere. Therefore in the presence of these considerations we are separated from the suppositions that the sight alone directs the travelling Pigeon.

Here presents itself an objection, which is that those Pigeons before being transported to considerable distances have already made short flights, and that thus they are able very well, from point to point, to direct themselves by sight towards the goal to be reached. This objection fails with those Pigeons which have not performed the trial of some leagues, but are taken at once to points more distant, and from thence returned. On the other hand, we cannot admit that the Pigeon follows always the same route, considering that account must be taken of the influence of the wind on Pigeons the same as migratory birds.—(*American Fanciers' Journal.*)

THE BOSTON POULTRY EXHIBITION.

A GREAT deal of care and attention has been displayed by the Boston Committee in the arrangement of this year's Show. The tent was one of the best we ever saw, and the pens were so placed that an equality of light was enjoyed by every specimen. Every possible precaution was made against accidents of any kind, and no person under any pretence whatever was admitted during the time the Judges were making their awards.

Messrs. Simpson & Dodds and Mr. Crabtree had it all their own way in the Grey *Dorkings*, with very high-class birds. In *Cochin* cocks the cup-winner was a magnificent White shown by Mr. Whitworth, who also won first with a hen of the same colour. Light *Brahmas* were very good, but some of them were sunburnt. Dark Brahmas were unusually good in colour and also in feather for the season of the year, the pencilling of most of the hens being perfection itself. In so small a collection as the one at Boston we never remember seeing so much high quality in *Hamburghs*, the Spangled, both Gold and Silver, being shown in the greatest condition. Of the Pencilled birds, the Golden were unquestionably the most perfect. The *Game* classes afforded a perfect treat to visitors, as some of the best strains were entered, Mr. Fletcher winning the cup with a most valuable Black Red, Mr. Martin running very close with a Brown Red as second. Mr. Walton won first also with a truly hard-feathered Red Pile. The *Bantams* were strong in entries, and to a lovely Silver-laced Sebright hen the cup was awarded. Mr. Leno was the winner of this premium. There were separate classes for *Houdans* and *Crève-Cœurs*, and the cup for these breeds was won by the latter variety, the entries being both heavy and uniformly good. The *Spanish* classes were alone worth the trouble of a long journey by any amateur. Both the winning cocks were first-class birds, which did much credit to Mr. Newbitt's management, for they were in excellent plumage. The hens were a large class, and an equality of condition marked this class generally.

A lovely summer day ensured a large attendance, and no doubt exists that this will prove itself one of the most successful Shows ever held in Boston.

DORKINGS.—*Cock.*—1, Simpson & Dodds 2, W. H. Crabtree. *Hen.*—1, W. H. Crabtree. 2, Simpson & Dodds. *hc*, W H. Crabtree; W. Morfitt.
COCHINS.—*Cock.*—1 and Cup, W. Whitworth, jun. 2, W. H. Crabtree. *hc*, H. Tomlinson. c, C. Wilson; E. Walstow. *Hen.*—1, W. Whitworth, jun. 2, W. H. Crabtree. *hc*, C. Wilson H. Tomlinson

BRAHMAS.—*Light.—Cock.*—1, W. H. Crabtree. 2, P. Haines. *hc*, W. Harvey. c, C. Wilson. *Hen.*—1, J. Long. 2, Mrs. Peet. *hc*, P. Haines. c, W. Thorn.
BRAHMAS.—*Dark.—Cock.*—1, W. H. Crabtree. 2, Rev. J. D. Peake. *hc*, J. F. Smith. *Hen.*—1 and 2, Rev. J. D. Peake. *hc*, W. H Crabtree; J. F. Smith.
HAMBURGHS.—*Golden spangled.—Cock.*—1 and Cup, T. Blakeman. 2, J. Long. *hc*, H. Pickles. *Hen.*—1, T. Blakeman. 2, W. Driver. *hc*, W Tickner; J. Long.
HAMBURGHS.—*Golden-pencilled.—Cock.*—1, W. Tickner. 2, W. Driver. *hc*, J. Long. *Hen.*—1, C. Judson. 2, Smith & Taylor. *hc*, E. Ayre; — Driver. c, — Snell.
HAMBURGHS.—*Silver-spangled.—Cock.*—1, H. Pickles. 2, J. Long. *Hen.*—1, J. Long. 2, H. Pickles.
HAMBURGHS.—*Silver-pencilled.—Cock.*—1, H. Pickles. 2, No competition. *Hen.*—1, H. Pickles. 2, No competition.
GAME.—*Black or Brown-breasted Reds.—Cock.*—1 and Cup, J. Fletcher. 2, H. E. Martin. *vhc*, J. Jeken. *Hen.*—1, J. Fletcher. 2, H. E. Martin. *hc*, J. Jeken; J. F. Walton; R. Whitton.
GAME.—*Any other variety.—Cock.*—1, J. F. Walton. 2, J. Fletcher. *hc*, H. E. Martin; W. Goose. *Hen.*—1, H. E. Martin. 2, P. H. Davies, jun. *hc*, C. Wilson; E. Winwood. c, J. R. Fletcher.
GAME BANTAMS.—*Black or Brown breasted Reds —Cock.*—1, E. Walton. 2, R. Hartley. *hc*, J. R. Fletcher; Dr. W. W. Saul. *Hen.*—1, J. R. Fletcher. 2, T. Sharples. *hc*, W. Storr, jun.; E. Walton.
BANTAMS.—*Any other variety.—Cock.*—1, M Leno. 2, J. R. Fletcher. *hc*, A. Storrar; A. & W. H. Silvester; E. Walton. *Hen.*—1 and Cup, M. Leno. 2, E. Walton. *hc*, J. R. Fletcher; A. & W. H. Silvester.
HOUDANS.—*Cock.*—1, G. W. Hibbert. 2, W. Whitworth, jun. *Hen.*—1, R. Coney. 2, W. Dring *hc*, G. W. Hibbert; J. W. Atkin; R. Coney; W. H. Crewe; S. W. Thomas. c, W. Dring.
CREVE-CŒURS.—*Cock.*—1 and Cup, W. Cutlack. 2, G. W. Hibbert. *hc*, W. H. Crabtree. c, H. C. Simmonds; J. J. Malden. *Hen.*—1, W. Cutlack. 2, E. Walton. *hc*, G. W. Hibbert; W. H. Crabtree. c, Mrs. H. C. Simmonds; W. Dring; J. J. Malden.
SPANISH.—*Black.—Cock.*—Cup, 1, and 2, R. Newbitt. *Hen.*—1, E. Brown. 2, E. Winwood. *vhc*, W. Woodhouse; R. Newbitt. *hc*, Mrs. M. A. Dixon; J. F. Dixon; R. Newbitt. c, J. Parker.
ANY OTHER VARIETY.—*Cock.*—1, T. A. Wright (Black Hamburgh). 2, A. & W. H. Silvester (Polish). *hc*, G. W. Boothby (Golden Poland); J. Long (Black Hamburgh); — Harvey. *Hen.*—1, E. Walton. 2, J Long. *hc*, A. & W. H. Silvester (Polish); R. Newbitt; G. W. Boothby (Golden Poland).
LOCAL CLASS.—1, J. Freemantle (Buff Cochins). 2,— Pearson (Golden Polands). *hc*, C. Brown (Buff Cochin). c, T. Horry (Dark Brahma); J. Willey, (Houdans); — Marriott (Dark Bantam).
DUCKS.—*Aylesbury.*—1, Mrs. Goose. 2, T. Horry. *Rouen.*—1, W. Bygott. 2, R. Fulton.

PIGEONS.

CARRIERS.—*Black.—Cock.*—Cup, 1, and 3, R. Fulton. 2, H. Yardley. *hc*, P. R. Spencer. *Hen.*—1 and 2, W. G. Hammock. 3 and *hc*, R. Fulton. *vhc*, H. Yardley. c, H. Marshall.
CARRIERS.—*Dun.—Cock.*—1, W. G. Hammock. 2 and 3, R. Fulton. *Hen.*—1, W. G. Hammock. 2 and 3, R. Fulton. *hc*, P. R. Spencer.
CARRIERS.—*Blue.—Cock*—1, W. Harvey. 2, W. G. Hammock. 3, H. B. Massey. c, H. Yardley. *Hen.*—1 and 2, W. G. Hammock.
TUMBLERS.—*Almond.—Cock or Hen.*—1, Cup, and *hc*, R. Fulton. 2, H. Yardley. 3, W. G. Hammock. *Short-faced Balds.—Cock or Hen.*—1, 2, and 3, W. Woodhouse. *hc*, G. Morling. *Short-faced Beards.—Cock or Hen.*—1 and 2, W. Woodhouse. 3, R. Fulton. *Any other variety.—Cock or Hen* —1 and 2, A. & W. H. Silvester. 3, W. G. Hammock. *hc*, W. G. Hammock; R. Fulton.
POUTERS.—*White.—Cock or Hen.*—1 and Cup, L. Watkin. 2, H. Pratt. 3, R. Fulton. *hc*, W. Harvey; L. Watkin. c, P. R. Spencer. *Any colour.—Cock or Hen.*—1, H. Pratt. 2, C. Martin. 3, R. Fulton.
BARBS.—*Cock or Hen.*—1, H. Yardley. 2, H. B. Massey. 3, R. Fulton. *hc*, C. Norman; R. Fulton.
TURBITS.—*Cock or Hen.*—1 and 3, R. Fulton. 2, H. Yardley. c, T. S. Stephenson.
JACOBINS.—*Cock or Hen* —1, W. Harvey. 2, C. Martin. 3, W. Woodhouse. *hc*, W. Woodhouse; R. Fulton. c, R. Fulton.
FANTAILS.—*Cock or Hen.*—1, J. Walker. 2, J. F. Loversidge. 3, R. Fulton. c, J. Walker; T. S. Stephenson.
DRAGOONS.—*Cock or Hen.*—1, R. Woods. 2, F. Graham. 3, R. Fulton. *hc*, R. Rylatt; H. Yardley.
ANTWERPS.—*Cock or Hen.*—1, H. Yardley. 2 and 3, C. W. Billett. *hc*, W. Harvey (2).
ANY OTHER VARIETY.—*Cock or Hen.*—1, 2, and *vhc*, R. Fulton (Trumpeter, Owl, and Tarbit). 3, W. Harvey. *hc*, A. & W. H. Silvester (2); H. Yardley. c, W. J. Shepherd (Black Nun).
SELLING CLASS.—1, W. Greenfield (Black Carriers). 2, C. Norman (Barbs). 3, J. T. Allen (Black Barbs).

Mr. Edwd. Hewitt was the Judge for poultry, and Mr. Massy for Pigeons.

BEE FEEDING; OR, SUGAR-AND-WATER VERSUS HONEY.

I HAD no idea when I wrote those few lines on the above subject that I should be handed over to the old veteran Pettigrew to be stung with his pen. However, I am not much hurt, for, like the bees, if they do sting now and then, we reap advantage from them; so I have from his remarks.

No doubt feeding is profitable at times, but with me I never began with bees for profit. I kept them because I liked to see them; I admire their industry. I never fed them as a rule, nor did I ever destroy them. I contented myself with a little honey from supers, but lately I have been forced as it were to read more about them, and seeing how much interest is taken in bees by so many, and the manis for new-fashioned hives, I have been a little drawn out. But when I read of sugar being made into honey I felt taken aback, and with Mr. Pettigrew's explanation I am no more satisfied than you can guard against foul play in competing for prizes, except, of course, it is admitted that any means may be used to produce results.

Mr. Pettigrew says, "Syrup made of sugar and water cannot be converted into honey." Naturally, perhaps, it cannot; but if bees are stuffed with it at all times what becomes of it? It is true he does say something of converting sweets into combs for breeding in; but the question is, Do they never store the syrup away with the honey?

I can plainly see that those who intend competing for prizes must work at feeding, and that to a very great extent if they hope to win.

On this question of bee-management either for pleasure or profit there is much to learn.—J. C., *Brentford.*

OUR LETTER BOX.

Non-sitting Fowls (*Fidgit*).—The vagaries you speak of do not belong to the non-sitting breeds. The first habit you mention may be attributed to the fact you mention. We cannot imagine the cause of the other unless she is in company of the more fortunate breeds, who are blest with "all a mother's gentlest cares," and plays at maternity. Feather-picking is common to Houdans in confinement at this time of year. The hen will shortly give up the habit, and will not take to it again till this time next year. If allowed her liberty she will never take to it at all. The laying you mention is excellent. Hens lay more eggs than it is supposed, but they do not always reach the right owners. You may introduce a new breed, and guard them with cerberean vigilance, but you will soon see them all over the country. This does not of necessity arise from dishonesty, but from hens laying about.

Poultry-yard (*T. K.*).—You do not give enough information. Does your place show all the space you have at command, or is there any outlet beyond the two roads that form your boundaries south and east? Assuming that there is not, we think you may keep a cock and eight hens. It would be necessary to their comfort to have the paving removed. Fowls will not do on paving stones; they get cramped and they cannot scratch. The manure heap is a help. If half the stone flooring of the barn were removed it would make a capital place for the fowls in wet weather, being earth covered with sand or grit. If they have any other outlet the numbers kept may be doubled or tripled. The essential is that they should have access to grass in some way, and that they should not be compelled to live on stones. Nothing is more useful for poultry than a barn, but it must have an earthen floor.

Insects in Hen House (*J. R. W.*).—The insects found in such quantities in your hens' nests and on the eggs, and hanging in clusters to the roof of your hen house, are the well-known Acarus (Dermanyssus) gallinæ, a fowl mite figured by De Geer MS., vol. vii., pl. 6, f. 13, and by Herrick Shaffer, No. 137, f. 14. The house wants thoroughly cleansing and washing with hot lime water. Gas-tar water and boiling water should also be freely used.—I. O. W.

Fowl's Legs Scaly (*I. C.*).—It is only of late years we have known the disease. It first appeared at Liverpool on a Cochin-China hen, at a time when the ground was covered with snow for some weeks. It was thought when the snow went the disease would go with it. It did not, for it was soon heard of in all directions. At first only old birds had it. Last year it appeared among chickens. Till that date only birds in confinement suffered from it, but now there are cases (few at present) among those at liberty. We have had to kill birds this year because the disease was so frightful. It is difficult to watch and treat it where many hundreds of fowls are kept, but we have made head against it in some instances by softening the legs and scales frequently with sweet oil or citrine ointment.

Rabbit's Eye Inflamed (*G. H. R.*).—Bathe the eye frequently with cold water.

Green Prize Cards.—Mr. Firth says that a green prize card *was* put into the basket with his prize buck and that the buck ate it, also that a Himalayan doe died from a similar cause. Let these facts warn committees from using green cards.

Taking Honey (*F. J.*).—Your idea of using an adapting-board above an eke cannot be carried into practice with advantage, for an eke is generally filled with broodcomb, and the honey goes to the hive above. Very little honey could be obtained from ekes cut from their hives, even in the best of seasons. Ekes enlarge hives and give the bees room to live and breed. If you use an eke 10 inches deep with an adapting-board it becomes a nadir, and may be used as such. The most of the honey will go to the upper hive, making it too heavy for keeping; but the nadir may receive all its bees and be kept as a stock hive. Eking is the simplest and best mode of enlarging a hive for honey; nadiring is adopted when both honey and a stock hive are wanted; and supering is resorted to for honeycomb.

Bees not Swarming (*C. M. Major*).—We advise you first to remove the super from your hive and drive all the bees out of it into the hive itself. Smoke applied at the top will drive the greater part of the bees down from the super before it is removed, or the bees may be driven by drumming after it is cut off, and then cast back on the front of the hive. If you want another super filled instead of a swarm, place a larger one on the hive to prevent swarming. If you prefer a swarm to another super, the removal of the present super will contract the space, and thereby tend to hasten the issue of a swarm. When bees hang long in clusters at the door of a hive they become in a sense morbid and inactive, and hence we prevent this by artificial swarming. If your gardener will summon courage enough to blow some smoke from old cotton rags into the hive, and then turn it on its crown and place an empty hive on and over it, rolling or tying a tablecloth round the junction of the two hives, and drum on the bottom one for four or five minutes, not more, you will have two hives which should be placed right and left of the present stand. If this had been done when the bees first began to hang out the swarm hive would by this time have been nearly filled with combs. The invention of artificial swarming is of great service to all who rightly practise it.

Bees Clustering but not Swarming (*A. C. N.*).—Take off the three glasses which are now full on your hive, and if you do not wish to take a swarm from it put larger supers in their places. As the bees are hanging outside it is very desirable to give them room enough inside. Wooden or straw supers are more readily entered by bees in a crowded hive than glass hives. If you wish to take a swarm no more supers should be put on. As the hive is probably well filled with honey, perhaps your better way will be to put a nadir below it, and take the honey from the top one in autumn, and keep the nadir for a stock hive.

Claiming a Swarm (*J. H. Howard*).—No man who has lost a swarm can compel a neighbour to give up a swarm that has settled in his garden, unless it can be proved that the swarm came from the claimant's apiary. In your case there were two strayed swarms settled in the same garden, and you could not point out either as yours. We knew an instance of a man claiming a strayed horse, not because he could identify it, but because he had lost one.

Drone Traps (*J. Hutchison*).—These are sold by the inventor, R. Aston, Upper Bar, Newport, Salop, at 2*s.* 6*d.*, or 2*s.* 8*d.* by post.

Bottles for Honey (*A. R.*).—Anyone who deals in preserve bottles and jars could supply you.

Young Linnets Plucking Young Canaries (*D. D. B.*).—It is not habitual with young Linnets to pluck or strip Canaries of their plumage the same as yours have done. Somewhat like Goldfinches, they are very handy with their "knives and forks," and if they see a misplaced feather, or one at all sticking out, they will have at it, a repetition of the plucking ensues, and frequent instances are known of birds being almost entirely stripped of their feathers. Canaries are at times equally culpable, both young and old birds. The Linnets may again repeat the mischief if the lot occupy the same apartment. The most effectual way to wean the depredators from plucking is to part them. You state you have "put the offenders into separate cages." You have acted wisely. There keep them, for it will check the propensity more than any other plan. As to placing them all together in the same cage for the more readily mating of them together when pairing time comes will not forward the birds. When you wish to breed with a pair (a cock Linnet and hen Canary), select a couple of healthy strong birds, and place them in cages side by side for a few days, after which, in the month of April, turn them into a breeding cage furnished with the necessary requirements for nest-building, and at the same time supply them daily with a generous diet, such as egg and bun crumbs and a mixture of seeds. This will tend to bring the birds into condition. A little extra attention in the way of keep, even before the two birds are placed together, will not be ill-bestowed.

METEOROLOGICAL OBSERVATIONS,

Camden Square, London.

Lat. 51° 32′ 40″ N.; Long. 0° 8′ 0″ W.; Altitude, 111 feet.

Date. 1875. June.	9 A.M. Barometer at 32° and Sea Level.	9 A.M. Hygrometer. Dry.	9 A.M. Hygrometer. Wet.	9 A.M. Direction of Wind.	9 A.M. Temp. of Soil at 1ft.	In the Day. Shade Temperature. Max.	In the Day. Shade Temperature. Min.	In the Day. Radiation Temperature. In sun.	In the Day. Radiation Temperature. On grass	Rain.
	Inches.	deg	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 16	29.601	68 0	62.2	S.	56.8	65.8	49.8	113.9	45.6	0 071
Th. 17	29 810	59.7	54.0	W.	56.5	71.2	46.5	118.1	42.6	0.165
Fri. 18	30.039	58.8	54.9	N.W.	56 5	70.1	50.8	121.2	47.1	0 100
Sat. 19	30.155	55.9	54 0	N.E.	56.9	73.6	46.2	116 9	43.7	0.088
Sun.20	29.969	59.5	58 1	S.W.	57.6	70 1	53.8	111.9	51.2	—
Mo. 21	29 801	54 0	49 8	N.	58.0	62.4	52.3	78.1	61.0	—
Tu. 22	30.160	69 5	54.8	N.N.E	57.0	74.1	45.9	121.5	42 1	—
Means	29.928	58.5	54.0		67.0	69 6	49.2	111.7	46 2	0.364

REMARKS.

16th.—Frequent (and occasionally heavy) showers all the forenoon, but from 1 P.M. fine and pleasant the remainder of the day.

17th.—Morning fine and calm and till noon; frequent distant thunder in the early afternoon; slight thunderstorm with hail at 4 P.M., and short sharp showers all the afterpart of the day.

18th.—Rain in the night and early morning; distant thunder at 0.45 P.M., at 2.0, 2.15 and 4 P.M., with slight showers.

19th.—Thick fog in early morning, not clearing off till 10 A.M., after which time it was very fine and pleasant.

20th.—Wet till 10 A.M., afterwards fair, but not very bright, and looking very stormlike at 8 P.M.

21st.—A cold cloudy day.

22nd.—A very bright pleasant day throughout, but with a rather cold wind.

Another cool week, the 9 A.M. temperature about 3° lower than in the one preceding, but the mean of the maximum and minimum nearly the same.—G. J. Symons.

COVENT GARDEN MARKET.—June 23.

Very good markets now, outdoor produce being freely supplied, and Strawberries a lively trade, but prices rule low in consequence of the abundance and the heavy supply of Cherries from the Continent, which, however, will soon cease when the bulk of Kent produce is under consignment, as report speaks of heavy crops. The prices of Potatoes have slightly declined, although the Jersey supplies are nearly over.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	0	0 to	0	0	Mulberries lb.	0	0 to	0	0
Apricots box	2	6	4	0	Nectarines dozen	10	0	24	0
Cherries box	2	0	4	0	Oranges ℔ 100	8	0	14	0
Chestnuts bushel	0	0	0	0	Peaches dozen	15	0	90	0
Currants ½ sieve	0	0	0	0	Pears, kitchen dozen	0	0	0	0
Black do.	0	0	0	0	dessert dozen	4	0	0	0
Figs dozen	8	0	12	0	Pine Apples lb.	6	0	10	0
Filberts lb.	0	0	0	0	Plums ½ sieve	0	0	0	0
Cobs lb.	0	0	0	0	Quinces dozen	0	0	0	0
Gooseberries quart	0	4	0	6	Raspberries lb.	0	0	0	0
Grapes, hothouse lb.	3	6	10	0	Strawberries lb.	0	6	2	0
Lemons ℔ 100	8	0	12	0	Walnuts bushel	8	0	12	0
Melons each	3	0	8	0	ditto ℔ 100	1	0	1	9

VEGETABLES.

	s	d.	s.	d.		s.	d.	s.	d.
Artichokes dozen	8	0 to	6	0	Leeks bunch	0	4 to	0	0
Asparagus ℔ 100	4	0	8	0	Lettuce dozen	0	6	1	0
French bundle	0	0	0	0	Mushrooms pottle	0	9	2	0
Beans, Kidney ℔ 100	2	0	0	0	Mustard & Cress punnet	0	2	0	0
Broad bushel	6	0	0	0	Onions bnsbel	4	0	8	0
Beet, Red dozen	2	0	4	0	pickling quart	0	6	0	0
Broccoli bundle	0	9	1	6	Parsley doz. bunches	4	0	6	0
Brussels Sprouts ½ sieve	0	0	0	0	Parsnips dozen	0	0	0	0
Cabbage dozen	1	0	2	0	Peas quart	1	0	2	0
Carrots bunch	0	6	0	8	Potatoes bushel	4	0	6	0
Capsicums ℔ 100	0	0	0	0	Kidney do.	4	0	8	0
Cauliflower dozen	3	0	6	0	Radishes doz. bunches	1	0	1	6
Celery bundle	1	6	2	0	Rhubarb bundle	0	4	0	9
Coleworts doz. bunches	2	0	4	0	Salsafy bundle	1	6	0	0
Cucumbers each	0	6	1	0	Scorzonera buudle	1	0	0	0
pickling dozen	0	0	0	0	Seakale basket	0	0	0	0
Endive dozen	2	0	0	0	Shallots lb.	0	8	0	4
Fennel bunch	0	3	0	0	Spinach bushel	3	0	0	0
Garlic lb.	0	6	0	0	Tomatoes dozen	2	0	0	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	1	0
Horseradish bundle	0	0	4	0	Vegetable Marrows doz.	2	0	4	0

New York Botanical Garden Library
3 5185 00266 2581